HARD EDGES SCOTLAND

DEVELOPING A PROFILE OF SEVERE AND MULTIPLE DISADVANTAGE IN SCOTLAND

TECHNICAL REPORT ON INTEGRATED QUANTITATIVE ANALYSIS AND QUALITATIVE METHODOLOGY

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1. Introduction and Background

1.1 Main research aims

This Technical Report provides a detailed account of the methods and the full quantitative evidence base supporting the Report *Hard Edges Scotland*, which is the main output of a research study whose fuller title was 'Developing a Profile of Severe and Multiple Disadvantage in Scotland'. This research has been undertaken by the Institute for Social Policy, Housing and Equalities Research (I-SPHERE), Heriot-Watt University, with support from Lankelly Chase (LC) and the Robertson Trust (RT).

This study seeks to provide a statistical profile of a key manifestation of 'severe and multiple disadvantage' (SMD) in Scotland, using this as a shorthand to signify the problems faced by adults involved in the homelessness, substance misuse and criminal justice systems in Scotland, with poverty an almost universal, and mental ill-health a very common, complicating factor. This profile has been built from interrogation of a number of distinct secondary datasets, both administrative and survey-based, which will together provide robust estimates of total numbers, the prevalence of particular combinations of deprivations, the demographic and socio-economic characteristics, background circumstances, quality of life and the cost and use of services by this group. Other more qualitative parts of the research explore the lived experience of people affected, including their perspectives on services, as well as the perspectives of service providers in local case studies. This report also covers the methodology used in this part of the study.

1.2 General Approach and Sources

This research is explicitly a follow-up to the study *Hard Edges: Mapping Severe and Multiple Disadvantage in England* published by Lankelly Chase in January 2015. That study, which had a significant impact, was primarily a quantitative descriptive profiling of the phenomenon, although it had been based on a more qualitative scoping stage. The core of the quantitative analysis was built on analysis of three administrative datasets based in the three key domains of SMD as defined in that earlier study, homelessness, offending and substance misuse, although this was supplemented by use of two more specialised sample surveys, one focused on 'Poverty and Social Exclusion' and the other on 'Multiple Exclusion Homelessness'. The study did not attempt to cover Scotland, as it was recognised that the data systems covering Scotland were different.

The extent of the differences in data systems in Scotland became more apparent as we approached the brief of extending the study into Scotland. The scope of 'SMD' was also significantly widened as a consequence of reflections on the original *Hard Edges* study, particularly the concern to give more attention to issues around mental health and the differential patterns of SMD experienced by women, subsequently drawn out in a second study for England on *A Gendered Perspective on Severe and Multiple Disadvantage* (Sosenko et al 2019).

Of the three administrative datasets used in *Hard Edges,* only a part of one relatively similar dataset (that relating to Drug Treatment) has been accessible for use in the

Scottish Study. Of the other two, Supporting People (SP) was never developed as a common dataset in Scotland, and has subsequently collapsed in England, while the Offender Assessment System (OASys) does exist in a similar form in Scotland (Level of Service/Case Management Inventory – LS/CMI) but has not proved amenable to access for this research owing to information governance issues. There is in Scotland an administrative individual record system for homelessness cases applying to local authorities, known as 'HL1', which is effectively a reasonable substitute for SP, given the relatively open nature of homelessness legislation and policy in Scotland, which means that a clear majority of homeless people (including single homeless) do apply to local authorities. We have also been able to make some use of an innovative data linkage project from connecting *Health and Homelessness in Scotland* (HHIS; Waugh et al 2018), although again information governance restrictions have prevented us from making as full use of this as originally anticipated. On the offenders side, we have been able to make use of a bi-annual Prisoners Survey conducted by the Scottish Prisons' service, which may be considered a fair substitute for OASys, although for offenders treated within the Community we are reliant on the rather basic administrative information collected and published on Criminal Proceedings and Community Justice, as well as general surveys as referred to below.

Given the difficulties with administrative datasets, as well as their limitations in coverage of certain issues of interest – notably mental health (MH), where services are generally acknowledged as inadequate relative to need, and domestic violence and abuse (DVA) which is an often-hidden problem where specific services only address a proportion of more extreme cases – we chose to also place significant emphasis on the analysis of sample household/population surveys. In addition to the more specialised PSE and MEH[1] surveys mentioned above, we draw extensively on the suite of household surveys which the Scottish Government maintains on a rolling basis: Scottish Household Survey (SHS), Scottish Crime and Justice Survey (SCJS) and Scottish Health Survey (SHeS). Of these, the SCJS is the most useful, because it covers all of the SMD domains; SHS is most useful in relation to homelessness, while SHeS covers alcohol misuse and mental health (MH) issues. Another valuable survey we have analysed and integrated into the study is 'Growing Up in Scotland' (GUS), and child/family cohort study which has been running for more than a decade. This survey, in particular, helps to sharpen the focus on the relationships between adult SMD and 'Adverse Childhood Experiences' (ACEs), a topic of strong current policy interest.

Finally, we are also able to make use of a new survey of the users of services providing emergency advice, support and material aid to people who may be at risk of destitution, based on the JRF Study *Destitution in the UK 2018* (Fitzpatrick et al 2018). This study involves a survey in 2017 of nearly 3,000 users of such services in 16 areas across the UK, including two case study areas in Scotland (Glasgow and Fife). Like the Prisoners Survey, this may be classed as a service-user based sample survey, and in the 2017 edition questions were asked to ensure coverage of all five domains of SMD.

[1] PSE 2012 Survey has a boosted sample for Scotland which means specific analyses for Scotland are viable, but MEH was targeted on selected services in seven cities of which only one was in Scotland. For this reason we do not include MEH in the systematic integrated analyses but refer to it on specific issues as appropriate.

1.3 Stages in the Research

For each of these potential sources, particularly the new ones, the research may be seen as falling into a number of stages

1. Scoping of dataset, including exploring its coverage of the domains of SMD, its size and representativeness, its coverage of other issues of interest (e.g. socio-demographics, quality of life, outcomes, geography, service usage and cost), mode of and limitations on access.
2. Negotiating and obtaining access to the dataset. This stage has varied, from direct access to datasets already held by the researchers (PSE, Destitution) through download of standard datasets from UK Data Service and analysis by the research team (SHS, SHeS), requesting/receiving datasets from data owner (e.g. SPS), 'Special Access' consent process with UK Data Service (SCJS, GUS), requesting special tabulations from data owner (HL1)[2], through to making a formal application through the NHS Public Benefit and Privacy Panel (PBPP) in association with the Administrative Data Research Centre and accessing the data in a secure lab (Scottish Drugs Misuse Database, SDMD). These processes vary in the time required; in the latter example, this time was in excess of 1 year.
3. Undertaking standalone[3] analyses of individual datasets, typically written up in the format of a working paper.
4. Where appropriate, sharing drafts of the working papers derived at stage 3. with the analysts in government or elsewhere responsible for the dataset, to check on our interpretation of the data and any issues about the analysis processes, assumptions or the inferences drawn.
5. Conducting an 'integration analysis' which combines the numerical estimates and profile information for the SMD groupings drawn from varying numbers of different sources, depending on the issue. This exercise entails devising a set of weights to generate best quantitative estimates of the overall numbers, allowing for differences in coverage, overlap and reliability. It also entails structuring outputs, so far as possible, to use equivalent classifications, for example of basic socio-demographic profile factors, while recognising that particular sources may provide uniquely more detailed information on particular issues.
6. Using this as the basis for developing the core narrative on the main quantitative findings from the research, as developed in the remainder of this draft, where tabular outputs are accompanied by an interpretive commentary
7. Generating local authority level estimates of SMD, from a sub-set of the above datasets, which informed the choice of case study areas for the qualitative fieldwork as well as substantive findings on the geography of SMD.
8. Reflecting on insights and issues arising, and how these may chime (or clash) with insights and issues arising from the qualitative case study work.

[2] It was our hope and expectation that we would be able to obtain special tabulations from the dataset constructed for the HHIS data linkage study. This proved not to be possible, so we have only been able to make use of the published report and supporting tables from this study.

[3] In some cases, external variables, for example census or SIMD indicators measuring characteristics of small area neighbourhoods or localities, have been attached to the data for analysis purposes.

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2. SMD Definitions and Classifications

2.1 The Evolution of SMD Classifications

In the original *Hard Edges* study we focused on three domains of disadvantage (homelessness, offending and substance misuse) and effectively set thresholds based on use of/engagement with services in each domain – Supporting People services for people experiencing or at risk of homelessness, particularly single homelessness; Criminal Justice assessment and supervision of non-trivial offenders either in custodial sentences or under supervision in the community; and people receiving treatment for serious Drug or Alcohol misuse. In some analyses allowance was made for a large group of adults equally affected by serious alcohol misuse but not in treatment, but this kind of adjustment was not applied across the board[4]. From the three domains, we derived seven combination segments or categories (e.g. homelessness only, homelessness and offending, homelessness, offending and substance), although for some purposes these were reduced to three (or four) 'counts' of the number of disadvantages ((0)-1-2-3). Our most widely-used definition of 'SMD' on this basis was the number experiencing two or three of these types of disadvantage (SMD2/3).

In that original study, most of the emphasis was upon 'Current SMD', by which we mean the number of people experiencing each disadvantage, separately or in combination, in a year (technically, this would be the 'stock plus flow' of live cases over a year). In a few analyses, for example some of the work using MEH data, we used an 'Ever SMD' basis, by which we mean people who suffered particular disadvantages, including combinations of several, at some time in their adult lives. It should be underlined that these experiences of different types of disadvantage may not have been at exactly the same time, under this definition. In subsequent work, particularly the *Gendered Profile* follow-up study in England, more emphasis has been placed upon 'Ever-SMD' definitions. There are various reasons for this but particularly important is the point that, as we come to rely more on the use of sample survey datasets, the number of cases with current experience of what are often relatively rare situations are too small to permit statistically viable analyses. The same issue affects this Scottish study, given that we place significant reliance upon sample surveys alongside the rather patchy coverage of administrative datasets. We report on both 'current' and 'ever' bases of SMD, but often the more robust, detailed and insightful conclusions derive from the 'Ever SMD' basis of analysis. However, some administrative datasets are likely to underestimate the 'ever' prevalence of some disadvantages. At the same time, it should also be stated that, with some datasets, we cannot make a clean, consistent distinction between current and ever; for example, 'ever' might mean 'occurrences over several different points in time, but not covering the whole of adult life'. It should also be borne in mind that some disadvantages are more persistent than others; for example, mental health conditions often persist over long stretches of people's lives, even though managed and alleviated by medication and other treatments, whereas other disadvantages like homelessness are more typically episodic.

[4] This adjustment was made in a variant estimate of total numbers, but did not affect the main profiling analyses. It was based on advice from Public Health England about the scale of comparable serious alcohol misuse going untreated in the community.

We retain and report on the original 3-Dimensional version of SMD in this study, partly to ensure continuity and comparability with the original *Hard Edges*, but also because the researchers believe it has validity in focusing on a particular group who combine a generally high level of multiple disadvantage with a tendency to be quite hard to help through services, owing to a degree of transgressive and/or chaotic behaviour. At the same time, we recognise that the wider perspective brought by also considering mental health (MH) and domestic violence and abuse (DVA) gives fuller recognition to a range of complex need experiences which are of concern and arguably require more policy attention and service response, and which tend to affect women disproportionately, in contrast with the original 3D SMD definition which more strongly involves men.

The problems with the 5D perspective are twofold. Firstly, it tends to bring in very large numbers, even on the current basis and certainly on the ever basis. This particularly arises because of the high population prevalence of Common Mental Disorders (CMD), which include depression and anxiety at a level which would be clinically recognised (e.g. by a GP). While one might opt to limit the definition to a range of more serious/severe conditions, this would not be practically applicable without a survey such as the Adult Psychiatric Morbidity Survey (APMS) which exists in England but not in Scotland. Even then, that does not deal with the objection that SMD may well involve MH conditions at the lower CMD level rather than at the very high level associated with, for example, in-patient treatment.

The second problem with the 5D approach is that the number of separate combination segments which can theoretically be identified is too large to be comprehensible by the analyst or the reader. We therefore typically reduce it to around 9 categories which include all the single domains, two domains including the original 3 plus combinations involving the two new domains (DVA, MH), and three-plus domains. We also offer a count measure from 0 to 5 domains, but recognise that in practice data may be sparse on 4- or 5-domain cases.

Even with these compromises, we still have potentially eight ways of analysing the data (Current vs Ever, 3D vs 5D, categories vs counts), which is too laborious to present in most cases. In practice, we tend to place most emphasis on 'Current SMD3D' (grouped categories, and counts) and 'Ever SMD 5D;' (grouped categories and counts), while also in some instances reporting 'Ever 3D' or 'Current 5D' where appropriate. The rationale for this is that this will generally pick up and describe the range of variation between different approaches to classification. The former approach is equivalent to that used in the *Hard Edges* study for England, while the latter corresponds to the main approach used in the *Gendered Profile* study[5]

2.2 Formal Definitions

In this section (Box) we set out the formal definitions used of each domain of SMD, as operationalised in this research. It is important to appreciate that, of necessity, there are compromises between (a) the ideal 'in principle' definition, (b) definition based on administrative recording system(s), and (c) definitions which can be implemented in particular household surveys.

[5] Although one difference is that the Gendered Profile study did not include Offending as a defining domain.

DEFINITIONS SUMMARY BOX

Domain	Definition	Dataset(s)
1. Homelessness	• Accepted as statutorily homeless/threatened with homelessness • Self-identifying retrospectively as 'homeless' • Self-reporting: applying as homeless; sleeping rough; sofa-surfed; living in emergency/temporary or highly insecure accommodation. • Combinations of recent housing problems as a proxy	HL1, HHIS SHS, PSE SHS, PSE, GUS, DEST, SPS-PS SCJS
2. Offending	• Being convicted, arrested or accused in connection with non-trivial crimes (i.e. excluding minor motoring offences) • Self-reporting being in trouble with police • Currently or recently in prison	SCJS, CP, PSE, GUS DEST SPS-PS, GUS, HL1
3. Substance misuse	• Drug and/or alcohol misuse, as indicated by: ➢ engagement in drug treatment programmes ➢ drug-related hospital treatment ➢ drug-treatment-specific prescriptions ➢ self-reporting use of Class A drugs and/or dependence on certain Class B drugs (e.g. cannabis) ➢ self-reporting heavy/hazardous alcohol use ➢ self-identifying as a having an 'alcohol or drug problem'	SDMD HHIS HHIS SCJS, GUS SHeS, SCJS, GUS DEST, SPS-PS, HL1
4. Domestic violence and abuse (DVA)	• Being a victim of DVA, as indicated by self-reported experience of: ➢ actual violence, coercive control or threats of violence, and/or stalking or harassment by partner/former partner(s)	SCJS, PSE, GUS

	➢ any forced sex since age 16 ➢ DVA as reason for loss of home ➢ simple self-reported experience of 'domestic violence'	PSE HL1 DEST
5. Mental health problems (MH)	• 'Common Mental Disorders' (CMD) such as depression and anxiety – serious enough to achieve recognition in a primary healthcare setting – and psychosis and other severe mental health conditions. Indicated by: ➢ relevant prescriptions ➢ hospital treatment/admissions ➢ referral agency or professional assesment ➢ survey responses to multi-item survey scales and questions about long-term health conditions ➢ self-identifying as having a mental health problem or support needs	HHIS SDMD SCJS, PSE, SPS-PS, GUS DEST, HL1

Key to sources:
HL1 – Homelessness LA case records; HHIS – Homelessness to Health Data Linkage study (Waugh et al 2018); SHS – Scottish Household Survey; SHeS – Scottish Health Survey; PSE – UK Poverty and Social Exclusion Survey 2012; GUS – 'Growing Up in Scotland' Cohort Survey; DEST – JRF 'Destitution in the UK' Survey 2017 (Fitzpatrick et al 2018); SPS –PS Scottish Prison Service, Prisoners Survey; SCJS – Scottish Crime and Justice Survey; CP – Criminal Proceedings statistics, Scottish Government Justice Department.

2.3 More detail on the domains

Homelessness

The starting point here is the legal definition, under legislation going back to the 1977 Homeless Persons Act. You are deemed legally homeless in Britain if you have no accommodation in which it is 'reasonable' to expect you to live together with your family. Local housing authority duties extend to people likely to become homeless in the near future (previously 28 days, now extended to 56 days). In Scotland these duties extend to all people without any 'priority need' distinction; in England and Wales, single homeless people typically would now be owed some assistance with prevention and relief, but not a full duty including rehousing.

In Scotland there is a well-established individual level *administrative* record known as 'HL1', so this gives a practical basis for definition: anyone applying to the local authority and found to be homeless or threatened with homelessness.

In some *surveys*, homelessness can be identified using a well-structured set of questions. The Scottish Household Survey is a good example. The relevant questions asked of random adult are:

> RA9 – Whether respondent has ever been homeless (unprompted definition of homeless defined as having lost their home with no-where to go to)
>
> RA9AN – Number of times homeless in the previous 2 years
>
> RA10N – Prompted follow-up (if homeless in last 2 years) with detailed definitions:
>
> > A - I have had to apply to the Council for housing because I was going to be asked/told to leave my home (i.e. threatened with homelessness).
> >
> > B - I have had to apply to the Council for housing because I didn't have anywhere to live (i.e. actually homeless).
> >
> > C - I have had to 'sleep rough'
> >
> > D - I have had to stay with friends or relatives because I didn't have anywhere else to live
> >
> > E - I have had to stay in emergency or temporary accommodation (e.g. hostel, refuge, B&B)
> >
> > F - I have had to stay in some other form of insecure accommodation (e.g. under threat of eviction, with no legal rights etc.)

We would count all of A to F as examples of homelessness. This survey provides one way to identify homeless people who do not apply to the local authority. Similar questions were used in PSE, but only with a 'last five years' time clause.

Questions that are this specific about homelessness are not asked in the other surveys used in this study, such as SCJS or GUS. In the former case, we use a combination of 'problems with housing in the last three years' together with a proxy prediction formula calibrated on the SHS which use a set of variables common to both surveys[6]. In the latter case (GUS) we used the following criteria for family households

> Currently homeless if (a) reason for move in last year evicted/repossessed or (b) staying in hotel/B&B/other or (c) if staying in temporary accommodation (Wave 5)

[6] This model has some similarity with those reported in Bramley & Fitzpatrick 2017. The variables used are: single person household; aged 16-24, 45-59, 60-74 and 75-plus; married; working; on benefits; relative low income after housing cost; SIMD quintile; in financial difficulty; social rented lettings; mental health institution residents; criminal justice institution residents

Ever homeless if (a) Currently homeless or (b) ever stayed in temporary accommodation or (c) if moved for reasons of eviction/repossession or relationship breakdown in Waves 3 or 7

In the Destitution survey current homelessness is defined based on current living place being rough sleeping, hostel or temporary accommodation, plus those living with friends/relatives who also used soup run or drop-in or 'Homelessness' agency, plus anyone else who slept rough in last month. In the Prisoners survey we use combinations of previous or expected accommodation being hostel/temp/B&B, and/or lost home at time of going into prison.

Offending

The basic concept is of having been involved in non-trivial criminal offending (i.e excluding motoring offences).

The administrative-based definition (as in CP, SPS-PS) would include those convicted of such offences, including all those in prison (including remand) plus those serving community sentences or under supervision orders. In the case of SDMD any of the following flags would indicate offending status: presenting information including any Criminal Justice issue; current contact not being treated because in prison; client currently accommodated in prison or in prison in last 12 months; legal case pending/DTTO/probation-supervision; drug use funded by crime.

The survey-based definition in SCJS is based on people ever accused of a crime, excluding motoring offences punishable by a fine or penalty points and cases not convicted. The 'current' version of this is mainly based on a random selection of the 'ever' version, because the more specific 'current' version is only asked of one-quarter of the sample.

In PSE, the definition is anyone with a criminal record or who has served time in prison. In GUS it is where the respondent or partner has been arrested or spent any time in prison (over different time periods for current vs ever). In Destitution it is whether people have ticked the box for being in trouble with the police over the last year.

Substance Misuse

This is based on either or both of drug misuse or alcohol misuse.

Drug misuse

The main administrative basis for this is being engaged in drug treatment programmes at tiers 3 or 4, and hence recorded in the SDMD. An additional source is the HHIS data linkage study where a much fuller record of problematic drug use is available by combining health records for drug-related in-patient or day case admissions, and drug-treatment-specific prescriptions, with the SDMD data itself. HL1 includes flags for cases who have reported needing or receiving support for drug (or alcohol) misuse, but it is clear from HHIS that the level of underreporting here is massive.

In surveys, varying amounts of information are available but the richest source is SCJS (self-completion data). The current drug use indicator is based on any use of Class A drugs and/or use of certain Class B drugs (e.g. cannabis) where the subject indicates

a dependency on these, within the last 12 months; the 'ever' version extends this to any time in the past. To comment further, it may be argued that this approach may catch a larger population than the treatment definition, including some occasional recreational users. Conversely, it may be argued that treatment-based definition may undercount the relevant population significantly to the extent that services have limited capacity (e.g. residential rehab units having limited capacity or possibly closing) and that some people mis-using drugs resist or avoid entering treatment. In GUS it is any use of illegal drug in last month and uses at least once per week; for the 'ever' version we include use in earlier waves than target wave 5. In Destitution it is covered by the tick box for 'Alcohol or Drug Problems' experience in the last 12 months. PSE does not include any questions on substance misuse, and neither does SHS.

Alcohol misuse

We do not have access to a detailed database equivalent to SDMD for alcohol treatment, although there is some summary numerical information in the Drug and Alcohol Waiting Times (DATWT) database. This suggests that numbers with seriously harmful alcohol problems seeking or being referred for treatment are larger than the numbers for drug misuse, at around 30,000 (flow) or 45-50,000 on a 'stock and flow basis. This could include a not inconsiderable number of cases from the non-private household population. . Based on experience in Hard Edges for England, we would expect only a minority of serious alcohol misuse cases to be receiving treatment, but the situation in Scotland may be different.

In the SCJS, based on limited questions, we take people who have had an alcoholic drink 'almost every day' in the last 12 months and who 'have felt very drunk' almost every day as indicating a 'current' alcohol problem This was previously revised from 'or' to 'and', which brought the incidence down to a very low 0.2% from 4.2%. For the 'Ever SMD' we broaden this slightly to drinking 4-5 days per week and feeling drunk at least twice a week (incidence still only 0.6%, so dwarfed by drugs in substance @11%). In GUS, current alcohol misuse would be if respondent drinks on at least 4-6 days per week and either drinks more than 25 units per week[7] or drinks more than 5 units on more than 3-4 times per week ('ever' is then based on similar flagging in earlier waves). With the benefit of hindsight, and comparing with the Scottish Health Survey as well as the admin datasets, it looks like our (revised) survey measures may have understated/underrepresented alcohol in the SCJS general household population, but overstated it somewhat in the GUS sample of parents.

The Scottish Health Survey goes into more depth on alcohol misuse and offers different approaches to definition, which appear to give widely differing incidence, ranging between 1.1% of adults ('AUDIT2' score>20 points), through 3.9% (Drkcat 'Harmful' (men > 50 units/women >35 units 'usual weekly consumption') up to 6.3% ('alcgrp16', harmful @ >35 units /week) of adults. It appears that the threshold we original started to use in SCJS would have been similar in effect to the middle of these three options, with a prevalence of 4.3% (pooled 2012-14 data) and therefore defensible given the lack of decisive guidance on the right level for this threshold. However, in practice, after comments from within the team, we switched to the 'and'

[7] This might seem a relatively low threshold, but it should be borne in mind that nearly all respondents in GUS are women, and parents of young children, and the normal recommended guideline for women is lower than for men, at 14 units per week.

version which means alcohol is not really adding much in the SCJS analysis. Later analysis using SHeS settles on a compromise of AUDIT harmful +dependent, which has a prevalence of 2.6%.

Mental Health

In relation to mental health we broadly follow the lead of the parallel 'Gendered Profile of SMD' project recently completed for England, and adopt a broad definition to encompass 'Common Mental Disorders' (CMDs) such as depression and anxiety, at a level which would be sufficient to achieve recognition and possible treatment in a primary healthcare setting. This broad definition also includes more severe mental health conditions such as schizophrenia, other forms of psychosis, bipolar disorder, personality disorders, etc. According to the Adult Psychiatric Morbidity Survey (APMS) for England (there is no equivalent for Scotland), approximately 19% of all adults have some form of mental health condition including CMDs, although quite a lot of these people are not receiving treatment for their condition. Although policies to improve mental health services are receiving more attention, there are still insufficient services available and many people with MH problems do not receive services. Consequently, a service-based definition or database is likely to be to some degree inadequate for this particular disadvantage, although people with more severe conditions are more likely to be captured by the relevant NHS datasets.

One of our key administrative sources (HHiS) captures mental health conditions through prescriptions, acute mental health admissions, and in-patient (and day case) admissions where mental health issues were flagged. However, it seems clear that even this does not capture the whole phenomenon. SDMD identifies MH issues through source of referral or co-occurring health issues flagged at assessment stage, and/or selected intervention types identified at review stage. HL1 flags MH as a possible support need or as a reason for loss of accommodation, and the prevalence of this has been rising significantly, although it may still be under-recorded.

Within surveys, we generally have to rely on general multi-item scales which can give a reasonable but not precise indication of the presence of CMDs, often in conjunction with responses to questions about long term health conditions. In the SCJS we take account of the short Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) score (values below of 24) and also health status being 'fair' to 'bad' and/or having a physical or mental health condition lasting more than 12 months and this having a limiting effect on day to day activities. In PSE we use two criteria: either having a long term condition or illness described as 'mental health', or having a General Health Questionnaire (GHQ) score above 32[8]. In GUS we use a either Medical Outcomes Short form (SF-12) mental health component summary (MCS) scale score of less than 40[9] *or* a Depression, Anxiety and Stress Scale (DASS) composite Z-score greater than 1 in Wave 4; GHQ in Wave 3 is used to translate this into 'Ever'. In the prisoners survey we also use the longer version of WEMWBS, while in Destitution it is a simple tick box

[8] The 12-item General Health Questionnaire (GHQ-12) is intended to screen for general (non-psychotic) psychiatric morbidity, and has been widely used and extensively validated. See Goldberg & Williams (1988), Hardy et al (1999).

[9] The SF-12 (Medical Outcomes Short Form) mental health component summary (MCS) scale is commonly used in surveys, for example *Understanding Society*, as a basis for measuring CMD in the general population – see for example Ware et al (1995), Gill et al (2007)

for mental health problems experienced in last year. Scottish Health Survey uses combination of WEMWBS and GHQ-12.

One has to comment that, to varying degrees, the surveys measure current or recent mental health episodes, and do not fully pick up the 'ever' dimension, particularly episodes in the more distant past. Nevertheless, it may be argued that current MH has very high prevalence, because MH conditions can have a long duration; the APMS in England suggests that current MH is equal to about 70% of ever MH.

Domestic Violence and Abuse

Indicators of DVA in administrative data are scarce, with nothing available from health records in HHiS or SDMD, although there is an indicator within HL1 showing relatively modest numbers based simply on those where reason for loss of previous accommodation was due to a violent/abusive dispute within household. DV is flagged in prisoners survey but most prisoners are male and so more likely to be perpetrators than victims.

Most evidence on DVA comes from surveys which can ask retrospective questions about experiences in the recent or more distant past, typically included as sensitive topics under 'self-completion. The SCJS indicator takes account of actual violence, coercive control or threats of violence, and/or stalking or harassment by former partner(s), either within the last year (current), or in the past (ever). The PSE indicator includes being hit/slapped/kicked by partner in last year, subject to coercive control, any forced sex since age 16[10]. Current DVA in GUS flagged if any of 5 types of violence or 5 types of threat of violence used by partner/former partner 4+ times, since birth of child up to Wave 6 i.e. last 6 years; Ever DVA if any of 3 types of coercive control, 5 types of violence or 5 types of threat of violence used one or more times since birth of child, i.e. 6 years). It will be noticed that the Ever vs Current distinction is not made consistently between these sources, with PSE being mainly current (but with one 'ever' component), while GUS really just widens the scope by relaxing the threshold rather than the timing.

[10] We also experimented with including being very dissatisfied with relationship and experiencing accident or injury around the home or a physical attack by a stranger or acquaintance last year, but this made no difference in practice

3. Integration of Estimates from Different Datasets

3.1 General Approach to Integration

In this section we provide a description and discussion of the approach to combining numerical estimates of SMD populations and their profiles, through a weighting scheme.

The ***main principles*** we apply in estimating SMD numbers by weighted combination of estimates from different data sources are as follows:

A. We give broadly equal weight to population sample surveys and to service-based data (i.e. administrative data, or surveys based on users of particular services), when estimating numbers for the private household population
B. We make a separate explicit estimate of numbers in the 'non-household population', drawing on appropriate sources which capture these groups (some of which are also sources used for A. above[11])
C. Where, within each grouping above, we have several sources which are fully overlapping and equally robust we give them equal weight
D. Where part or all of a group covered by a dataset is non-overlapping, this can be added (most obviously true for some non-household groups)
E. Where one dataset partially overlaps another, for a known sub-group, we give it a weight based on the share of that sub-group in the overall population (e.g. GUS, which covers parents, vs SCJS which covers all adults)
F. Where a survey or service dataset only covers certain categories/segments, we only give it a weight for those categories (e.g. SDMD only covers substance-related categories, HL1 only covers homeless-related categories, prisoners survey only covers offending-related categories)
G. Weights used initially for estimating numbers are the basis for weights used generating profiles, but in general weights for profiles are all scaled to sum to 1.00.

3.2 Fuller discussion of integration

A general feature of the approach adopted in this study of Severe and Multiple Disadvantage (SMD) in Scotland, following the predecessor *Hard Edges* study in England, is that estimates of numbers and profiles of different sub-groups experiencing SMD are generated by combining estimates derived from single datasets into a composite picture. This combining process has been variously referred to as 'blending' or 'triangulation'*. It does not involve direct data linkage between these datasets at individual record level*. The process is described and justified in general terms below, with an illustrative example.

The basic idea is that no one dataset contains all of the cases of people experiencing deprivations in a particular domain (e.g. drug misuse, homelessness) or the

[11] Key sources for non-private household population include HL1, Destitution Survey and Prisoners Survey. This category includes allowance for some groups, e.g. sofa surfers, who may not be fully captured in conventional household surveys.

combinations of multiple deprivations which constitute SMD (e.g. drug misuse + offending; drug misuse + homelessness). However, different datasets capture somewhat differing aspects, and are collected through different processes applied to different if overlapping populations, and thereby give a somewhat differing 'view' of the group(s) in question. By combining these different 'views' from different datasets, it should be possible to obtain a more representative overall view of the phenomenon. Obviously, for this to work, we have to have a clear understanding of the processes generating each dataset, its scope, coverage and limitations. Given that knowledge, it is possible to apply appropriate *weightings* to the data from different datasets when combining them, so as to reflect and correct for these key features.

The *weightings* used in this process would reflect some or all of the following:

A. *Scope of dataset*: this refers to the type of population covered, whether through sampling or attempted capture of all cases; for example, adults in private households, residents in prison or other institution, users of drug treatment services.
B. *Coverage of the dataset*: how far all the individuals/cases 'in scope' are actually likely to be captured.
C. *Sampling*: where applicable, the design of any sampling and the (absolute) size of the sample affect the precision of any estimates grossed up to a whole population basis.
D. *Response:* where there is an opportunity for people to opt out or not be contacted, there will be non-response which needs to be allowed for in 'grossing up'; and this may affect some types of people disproportionately, creating possible non-response bias.
E. *Item non-response*; subjects (or caseworkers) may not answer certain questions, because of sensitivity, survey fatigue, poor wording of questions, or because supplying the information is treated as purely voluntary.
F. Duplicate cases: these may arise when the same individual makes multiple use of a service, or caseworkers make multiple entries; if there is no data linkage or use of unique identifiers it may not be possible to eliminate such cases, although global assumptions may be applied.
G. SMD-domain identifying questions: datasets vary in the extent to which they ask questions sufficient to identify whether particular SMD-deprivations apply, and whether those questions and thresholds correspond to our preferred definition or are only an approximation

Broadly speaking, numbers from datasets with different scope and/or coverage may be combined by addition, insofar as they are non-overlapping at a point in time. An example would be the Scottish Crime and Justice Survey (scope=adults in private households) and the Scottish Prisoners Survey (scope=adults in prison). If they are partially overlapping, one would seek to add appropriate proportions, allowing for the estimated degree of overlap, while in generating national total numbers one would try to estimate the proportion captured and gross up accordingly. Similarly, for total numbers we would gross up by reciprocal of sampling fraction and response rate, making any adjustment where possible for response bias, and deducting any allowance for duplication. Where different datasets represent the same (sub-)populations we would combine by equal weighting, insofar as each dataset is seen

as equally robust, but where for various reasons robustness was seen as lower, we could give a lower weight. This step would be likely to involve judgement.

On point G., for each SMD domain we would consider which dataset(s) have the best identifying questions and give the best overall estimate of prevalence Where we have datasets in which, owing to question wording or item non-response, the identification of that domain is less complete, we would consider grossing up to give a consistent rate of prevalence with the more robust national estimate. An example of this in relation to homelessness is illustrated below. Another option which might be considered could be imputation of that attribute based on modelled predictions from another dataset. This was used to supplement the homelessness flag in SCJS, with the imputation formula being calibrated on the retrospective homelessness experience questions in SHS.

3.3 Example

We take for illustration the example of the overlap between homelessness and offending, in the Current SMD(3D) classification. We ended up having six datasets potentially relevant to this overlap group. Two of these are general household surveys representing the general adult household population (SCJS) and the sub-set within that of parents within the household populations (GUS).

- Scottish Crime and Justice Survey (SCJS)
- Growing Up in Scotland (GUS)

We give these weights of 0.75 and 0.25 reflecting the general share of non-parents and parents in the household adult population (as in the SCJS), and then combine that with an overall weight of 0.5 reflecting the general approach of giving equal weight to general population surveys. The weight for SCJS is 0.75*0.5=0.375 and the weight for GUS is 0.25*0.5=0.125.

Three further datasets feed into the ‘service based’ estimate of adults experiencing homelessness and offending. One (DEST) is a specialist survey of people using emergency services, while the other two are administrative record data relating to the two domains of homelessness (HL1) and offending (CJ).

- Destitution in the UK Survey (DEST)
- Homeless Applicants to Local Authorities (HL1)
- Criminal Proceedings Statistics (CP)

We give these three sources equal weight (0.35), because there are no strong reasons for claiming one is markedly superior to the others – each has strengths and limitations. However, we make a downward adjustment to two of these (DEST and HL1), to reflect an estimate (informed by these datasets themselves and also estimates of the composition of ‘core’ and ‘wider’ homelessness in Bramley 2017 and 2019, s.5.8)) that around a quarter of these homeless people are not in the private household population at a point in time, and should be accounted for separately, as picked up below. We do not make this adjustment to the CJ stats because these refer to offenders under supervision in in the Community, not those in prison who are accounted for below. The resulting weights for HL1 and DEST are thus 0.35x0.75=0.263, while that for CJ is 0.35.

It should be noted that DEST and HL1 are individual records and cases flagging both homelessness and offending can be identified directly. CJ stats for offenders in the community are aggregated and do not contain indicators of homelessness (nor reliable measures of substance etc); therefore in this case we apply proportions observed in the SCJS dataset, of offenders who have indications of homelessness over all offenders, to the total of offenders supervised in the community.

The final part of the numbers calculation adds in the estimated number of adults with homelessness+offending in the non-private household population. This brings in the final, sixth dataset used in this case, the prisoners' survey (SPS-PS), with a simple weight of 1.0 (this institutional population being non-overlapping with the populations covered by the other sources).

- Scottish Prisoner Survey (SPS-PS)

But this calculation for people not in private households also includes the estimated 25% share of the numbers from DEST and HL1 who are in communal establishments, including hostel and B&B residents, hospitals, etc., but also rough sleepers, sofa surfers (insofar as missed in surveys) etc. For these two groups weights are 0.25x0.5=0.125; 0.25 being the part not counted within the private household sector, and 0.5 because these two measures are fully overlapping

It should be noted that the numbers from each source fed into these calculations are the 'grossed up' numbers, estimated on an annual 'stock+flow' basis (that is, the number in that situation on a given day, plus the additional cases likely to experience it over the following 12 months). By 'grossed up' we mean multiplied by appropriate factors to correspond to the expected national total, allowing for sampling, response, and any known limitations of coverage or bias. So, for example, the SCJS would be grossed up using the standard 'random adult' grossing weight in the survey dataset, but divided by two to reflect the pooling of two waves of the survey. DEST would be grossed up using the 'national annual weight' derived as described in Bramley et al (2018)[12]. HL1 is grossed up to reflect the proportion of people experiencing homelessness who apply to a local authority (0.7), as estimated from the SHS.

The weights are initially developed to estimate the *numbers* in each segment (annual stock and flow basis). So, for the example outlined here, the resulting numbers are shown in Table 1, Row 5 (see below overleaf). A similar approach is followed in relation to each of the other three SMD definitions (Ever 3D, Current 5D, Ever 5D), although some different datasets are drawn in (e.g. use of PSE for 'Ever' survey-based estimates), and with some datasets additional assumptions have to be made to obtain 'Ever' values.

The weights used in generating the numbers are also the basis for the weights used when generating the profile proportions (percentages) in the different socio-demographic, economic, and other characteristics categories. However, insofar as only some of the datasets include measures of particular characteristics, then the number of datasets feeding in to each table/chart will fall short of the full set of data

[12] *Destitution in the UK 2018 Technical Report*,

sources contributing to the numbers. In these cases, we rescale the weights relating to the datasets which are included so that they always add up to 1.00.

4. Overall Numbers

4.1 'Classic' 3-Dimensional SMD

Table 1 presents our (current) best estimates of the number of adults experiencing SMD using the original 'Current 3D' definition. These estimates are for a typical recent year around 2015[13]. While it is obviously of interest to compare these numbers with the estimates from *Hard Edges*, it is as well to be aware of some differences in the effective definition as well as the methodology applied in Scotland. Where we have reasons and evidence to indicate that there are significant groups experiencing a particular disadvantage but not using (particular) services, then we do adjust for this. Obviously salient examples include homelessness, where evidence from SHS suggests that only 70% of people reporting experiences of homelessness retrospectively say that that they applied to the local authority, and substance (drugs) misuse, where the evidence from the HHiS study and the SCJS both suggest that the drug treatment programme (reflected in SDMD) is only capturing a minority of current drug users.

Table 1: Estimated Numbers of Adults by Current SMD 3D Classification, Scotland

TYPOLOGY	PRIVATE HSHLD POPN		NON-PRIV HHD POPN	WEIGHTED TOTAL	Percent of
CURRENT SMD 3D CATEGORIES	SURVEYS	SERVICES	SERVICES	ADULTS	England Hard Edges
No disadv	4,236,337	4,300,685	103,716	4,372,227	
Homelessness only	44,234	37,596	12,550	53,465	85%
Offending only	35,378	23,674	4,062	33,588	30%
Substance only	90,886	32,724	7,799	69,604	18%
Homeless + Offending	3,489	6,065	3,754	8,531	8%
Homeless + Substance	2,341	7,702	3,325	8,346	13%
Offending & Substance	7,298	11,704	2,410	11,911	38%
All 3 Disadv	4,281	4,093	1,484	5,670	10%
Total	4,424,243	4,424,243	139,100	4,563,343	
Count Version					
No disadv	4,236,337	4,300,685	103,716	4,372,227	
SMD3D1	170,497	93,994	24,412	156,658	
SMD3D2	13,128	25,471	9,489	28,788	
SMD3D3	4,281	4,093	1,484	5,670	
Total	4,424,243	4,424,243	139,100	4,563,343	

Note: in this and following tables, the fact that the numbers have not been rounded should not be taken to imply a high level of precision. In the main research report and associated publications these

[13] The temporal coverage of the datasets varies but most commonly refers years up to and including 2015. Slightly older datasets are PSE (2012) and GUS (c.2010).

numbers are presented in rounded form. The figures in the final column express the Scottish total in col. 4 as a percentage of the equivalent number estimated for England in the 2015 *Hard Edges* study.

These comments should be borne in mind when considering the comparisons with the numbers from the English study. All of the single domain figures exceed the 'pro rata' norm of 10%, which would be expected if it was simply proportional to population of the countries, with homelessness particularly high[14]. The latter probably reflects the relatively generous homelessness regime in Scotland . Of the two-way combinations, homelessness-offending looks low, perhaps because the several sources are weaker at capturing this particularly in current mode. Otherwise, the Scottish numbers look high relative to England, particularly for the offending-substance combination. This may reflect a reality of higher incidence of these issues.

While the combination of all three domains is consistent with the English estimate (10%), the key SMD definition based on 2 or 3 domains shows Scotland at 12.9% of England, which is significantly above pro rata. The headline number here in Scotland? is 34,500 adults, of whom 5,700 experience all three disadvantages. 157,000 currently experience one of these disadvantages.

Reviewing the comparison between survey-based and service-based estimates for the same categories, in most cases the figures are in a similar ballpark. The main exception is substance-only, where the survey figures are markedly higher than the service-based figures. It may be the case that the drug treatment service is not reaching all of its potential clientele (some evidence for this is given in the qualitative part of the research), but it is also apparent that the definition of drug misuse in some of the surveys is wider than the threshold for access to higher tier services. Nevertheless a recent ISD estimate for prevalence of problem drug use (of opioids and/or benzodiazepines) was 55,800-58,900 in 2015/16 There is also the issue of alcohol misuse which is not so adequately measured through the service-based approach, while also being inconsistently measured across the surveys..

The non-private household population is a significant part of the estimated numbers, ranging from 11% of substance-only to 44% of homeless+offending categories, and averaging 32% for the 'any 2 or 3' grouping which is our core definition of SMD. This underlines the importance of measuring and profiling this group in the population, subject of ongoing research with JRF and ONS[15].

Table 1A looks at the composition of SMD segments from the viewpoint of each domain separately, in the case of current 3D approach. This shows lower overlap for both homeless and substance, with 70-73% being single domain cases. Offending has

[14] Homelessness estimates from the SCJS include an enhancement using a proxy-based formula calibrated on the SHS data; HL1-based estimates adjust for people not applying to LA (based on SHS) and from annual flow to 'stock plus flow' basis.

[15] See ONS (2018) 'Alternatives for including non-household populations in estimates of personal well-being and destitution', Summary and Recommendations, https://www.ons.gov.uk/methodology/methodologicalpublications/generalmethodology/onsworkingpaperseries/alternativesforincludingnonhouseholdpopulationsinestimatesofpersonalwellbeinganddestitution
and Bramley, G., Sosenko, F., Wood, J.and others (2018) *Scoping Project to investigate the alternatives for including non-household populations in estimates of personal well-being and destitution.*Interim Research Report to Joseph Rowntree Foundation and ONS.
https://researchportal.hw.ac.uk/en/publications/scoping-project-to-investigate-the-alternatives-for-including-non

more overlap, with only a bare majority being offending-only, and a particularly large overlap with substance.

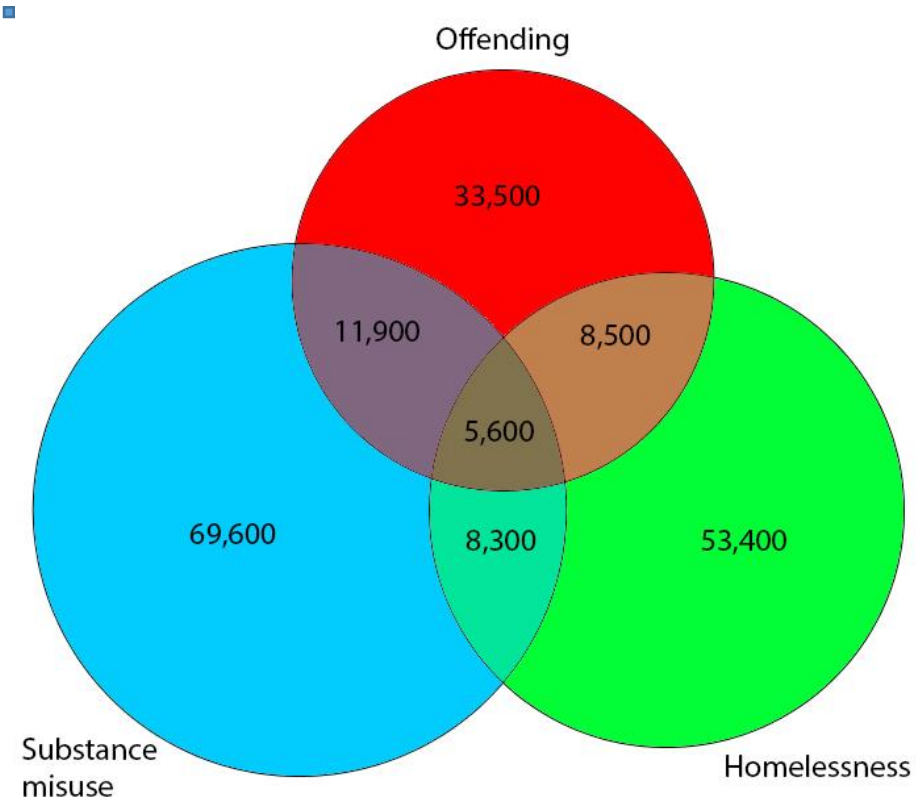
When we draw the Venn diagram, as in Figure 1B, substance is be the largest ellipse, and offending the smallest.

It is worth commenting in relation to Table 1A that the total number under ‘Substance’ (95,530) bears comparison with a recently-published estimate of the prevalence of problem drug use in Scotland (ISD 2019) of 57,300 derived from a study using three administrative data sources and ‘Capture-Recapture’ methods. Our estimate of substance misuse includes alcohol, and this would account for the major part of the difference.

Table 1A: Composition of overlap segments for each domain (Current 3D)

Current 3D	Homeless	Offending	Substance
Only	70.3%	56.3%	72.9%
Homeless		14.3%	8.7%
Offending	11.2%		12.5%
Substance	11.0%	20.0%	
Both	7.5%	9.5%	5.9%
Total %	100.0%	100.0%	100.0%
Total N	76,012	59,701	95,531

Figure 1B: Venn Diagram for Current SMD 3D



Ever SMD (3D)

Table 2 shows the estimated numbers for 'Ever SMD (3D)' in Scotland. These numbers are all naturally larger than those in Table 1. How much larger they are is indicated by the multiplier factor shown in the last column. This ranges from 3.7 for Substance Only and also for 'All 3 disadvantages' to 11.5 for 'Homeless and Substance', with an overall factor for SMD2/3 of 7.2. Overall the headline figure would be a quarter of a million adults who have experienced SMD2/3 over their adult life,

21,000 having experienced all three disadvantages, and 875,000 who experienced at least one.

There are wider differences between the survey-based numbers and the service-based numbers. This partly reflects deficiencies in some surveys in recording full retrospective experiences, partly a rather crude basis for estimating lifetime offending, and partly the very large figures revealed by the HHiS data linkage study.

Table 2: Estimated Numbers of Adults who Ever Experienced SMD (3D), Scotland

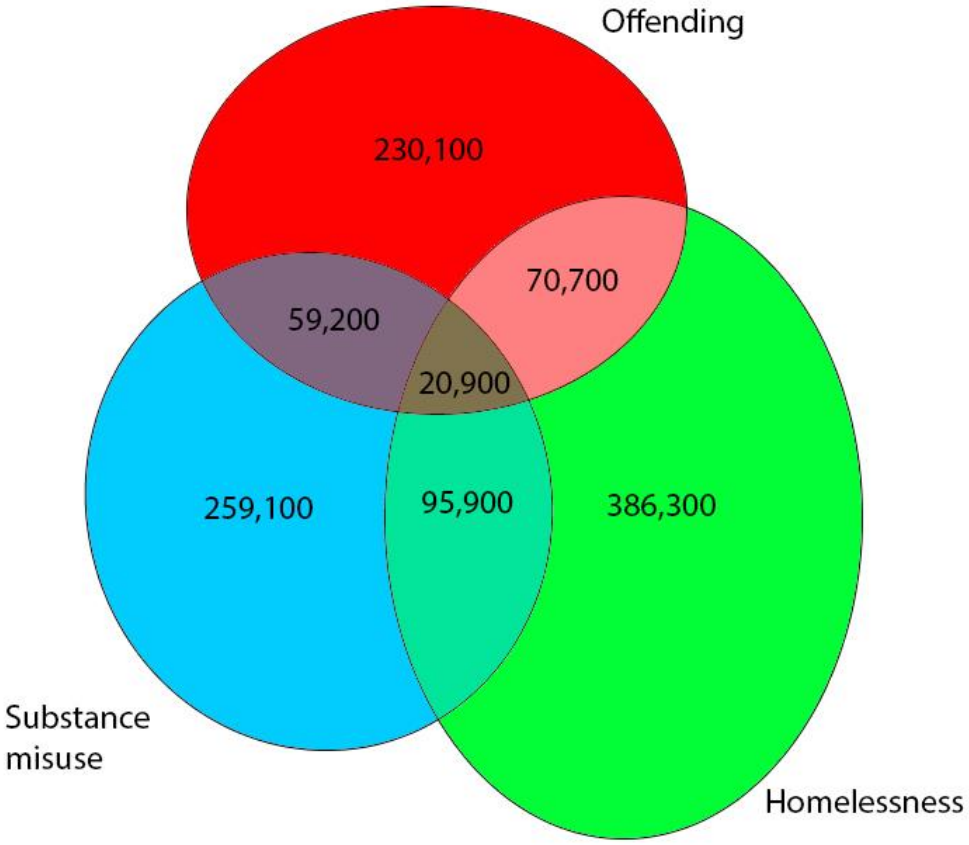
EVER SMD 3D CATEGORIES	Hhd Pop SURVEYS	Hhd Pop SERVICES	Non-Hhd SERVICES	ADULTS	Ever:Current Multip-Lier
No disadv	3,602,789	3,071,331	103,716	3,440,776	
Homelessness only	298,026	449,557	12,550	386,342	7.2
Offending only	77,143	375,000	4,062	230,134	6.9
Substance only	337,989	164,661	7,799	259,125	3.7
Homeless + Offending	43,599	90,490	3,754	70,799	8.3
Homeless + Substance	7,375	177,860	3,325	95,942	11.5
Offending & Substance	41,727	71,969	2,410	59,258	5.0
All 3 Disadv	15,594	23,375	1,484	20,968	3.7
Total	4,424,243	4,424,243	139,100	4,563,343	
Count Version					
No disadv	3,602,789	3,071,331	103,716	3,440,776	
SMD3D1	713,158	989,218	24,412	875,600	5.6
SMD3D2	92,701	340,319	9,489	225,999	7.9
SMD3D3	15,594	23,375	1,484	20,968	3.7
Total	4,424,243	4,424,243	139,100	4,563,343	1.0

Table 2A shows the composition of ever SMD 3D segments from the viewpoint of each domain separately. This time both offending and substance are three-fifths ‘only’ cases while homelessness is 67% ‘only’. Now homelessness is the largest group, suggesting it is spread more across the community rather than being confined to a tighter-knit group with recurrent /ongoing involvement, which seems to most characterise the offending group. It is perhaps surprising that among the homeless the bigger overlap is substance, and among substance the bigger overlap is homelessness, while among offending the bigger overlap is also with homelessness. A strong relationship between substance and homelessness is revealed by the HHiS study, however.

Table 2A: Composition of overlap segments for each domain (Ever 3D)

Ever 3D	Homeless	Offending	Substance
Only	67.3%	60.4%	59.5%
Homeless		18.6%	22.0%
Offending	12.3%		13.6%
Substance	16.7%	15.5%	
Both	3.7%	5.5%	4.8%
Total %	100.0%	100.0%	100.0%
Total No	574,051	381,159	435,293

Figure 2B: Venn diagram for Ever SMD (3D)



4.2 Five-dimensional SMD

We turn now to consider the wider five-dimensional SMD typology, bringing mental health (MH) and domestic violence/abuse (DVA) into the picture. For reasons explained above, the classification is somewhat grouped, with ten categories and up to five levels, although in the 'Current' version we group SMD3, 4 and 5 together as

the numbers with 4 or 5 current disadvantages are very small or zero. While the general approach of combining survey and survey-based estimates works in nearly all cases, for the category 'DVA only' there is insufficient of a service-based source to utilise[16]. It will be noted that the numbers for homeless, offending and substance-only are somewhat lower than in Table 1, logically, because some of the people classified in this way in the 3D approach also have one (or more) of the additional disadvantages (MH or DVA).

As expected, much the largest addition to the numbers comes from 'MH only', which is estimated at 205,000, while MH combined with one other disadvantage adds another 41,000. In these cases there is a large difference between the survey and service-based estimates; this may be seen as consistent with a story of inadequate coverage of need by MH services, but also partly reflects the use of various proxies and scales to flag MH problems in surveys, as these may pick up some cases not requiring current treatment. DVA-only appears to be similar in scale to homelessness only or substance only, at 45,000, while DVA + one other domain adds 8,000. Adults currently experiencing three or more of these five disadvantages number nearly 16,000. With 66,000 experiencing two or more, there is a combined 'Current SMD' number on this basis of 82,000. One could therefore say that shifting the definition of SMD to a 5-dimensional basis raises the current numbers by two-and-half to three times.

Table 3: Estimated Numbers of Adults by Current SMD 5D Classification, Scotland

CURRENT SMD 5D CATEGORIES	Hhd Pop SURVEYS	Hhd Pop SERVICES	Non-Hhd SERVICES	ADULTS	% of England
No Disadv	3,807,993	4,254,748	103,391	4,112,384	13%
Homelessness only	25,049	34,368	8,663	38,372	68%
Offending only	23,359	25,000	2,459	26,638	
Substance only	70,586	24,423	7,219	54,724	4%
MH Only	358,025	46,692	2,632	204,991	3%
DVA Only	44,756	0	0	44,756	5%
2 domain neither	8,881	15,585	4,032	16,265	29%
2 domain inc DVA	10,216	4,037	1,154	8,281	7%
2 domain inc MH/both	62,667	10,871	4,283	41,052	2%
SMD3+	12,711	8,519	5,265	15,880	5%
All adults (or households)	4,424,243	4,424,243	139,100	4,563,343	10%
Count Version					
SMD5D0	3,807,993	4,254,748	103,391	4,112,384	13%
SMD5D1	521,775	130,483	20,974	369,481	4%
SMD5D2	81,764	30,493	9,469	65,598	3%
SMD5D3-5	12,711	8,519	5,265	15,880	5%

[16] In theory the Destitution survey could be used, but it appears that there were no cases with DVA-only in this survey, which is focused on users of emergency services.

In this and subsequent tables, '2-domain neither' means 2 of the 'original' 3D disadvantages, homelessness, substance and/or offending, and neither of the additional disadvantages, MH or DVA.

We are able to compare these estimates with nominally comparable numbers for England presented within the forthcoming *Gendered Profile* report, although there are detailed differences of coverage and approach. These comparisons, expressed as a percentage of the comparable England figure, are shown in the right hand column of Table 3. This suggests that Scotland is exceptional in terms of homelessness but otherwise has a lower level of SMD defined in this way. However, care is needed with this comparison because that English study adopted a maximal definition of MH and drew on a population survey (APMS) designed to measure all aspects of MH including common mental conditions; these have a higher prevalence (current or ever) than the measures used in our Scottish study, and dominate the English comparator data.

Table 3A looks at the composition viewed from the perspective of each component domain. As a note of caution, quite a lot of crude apportionment was used in creating this table and also 4a below. Mental health dominates in sheer numbers, and has the highest proportion of 'only' cases. DVA has a similar order of magnitude as the other domains (e.g. offending, homeless) but has higher share of 'only', implying less overlap overall. Offending is the most overlapped, followed by homelessness.

Table 3A: Composition of overlap segments for each domain (Current 5D)

Curr 5D	Homeless	Offending	Substance	MH	DVA
Only	53.0%	43.9%	61.6%	80.2%	71.5%
HL/Off/Subst	15.0%	17.9%	12.2%	12.9%	13.2%
MH	15.1%	18.0%	12.3%		
DVA	3.8%	4.5%	3.1%	3.2%	
SMD3+	14.0%	24.2%	12.4%	4.7%	9.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Finally, we present the 'Ever SMD' version of five-dimensional SMD in Table 4. As with the 3D classification, shifting to an 'Ever SMD' basis raises the numbers very considerably. This mark-up is greater for homelessness and the traditional SMD 3D combinations than it is for MH, which tends to dominate the totals in the 5D classification. The earlier-noted persistence of MH conditions, together with some limitations of the ability of our survey sources to measure past MH problems, contributes to this outcome[17]. Overall, the results suggest that adults with one disadvantage would be 3.1 times higher on the 'ever' basis, those with 2 disadvantages would be 3.7 times higher, while those with 3+ disadvantages would be 10.4 times higher, giving a total of over 165,000 for Scotland. There would be 410,000 with 2 or more disadvantages over their adult lives (9% of the relevant

[17] Our strongest service-based source on MH, the HHiS study, suggests 'ever-MH-only' would be ten times higher than 'current MH only'.

population). Interestingly, the 'three or more' Ever SMD 5D number is 10.4% of the equivalent English figure from the Gendered Profile, which suggests that it is in the same ballpark. The Scottish numbers are higher for homelessness and substance-only and for 2 disadvantages involving these or offending.

Table 4: Estimated Numbers of Adults by Ever SMD 5D Classification, Scotland

EVER SMD 5D	Hhd Popn Hhd Pop SURVEYS	Hhd Popn Hhd Pop SERVICES	NPHHP NPHHP SERVICES	Weighted Total ADULTS	% of Engl
CATEGORIES					
No Disadv	2,975,601	3,054,295	103,391	3,023,130	13%
Housing only	204,463	249,297	8,663	235,543	87%
Offending only	61,394	123,075	2,459	94,694	
Substance only	231,621	144,242	7,219	195,151	32%
MH Only	317,628	505,997	2,632	414,445	4%
DVA Only	190,419	0	0	190,419	7%
2 domain neither	35,390	114,306	4,032	78,880	603%
2 domain inc DVA	82,821	10,004	1,154	47,567	16%
2 domain inc MH/both	135,413	91,457	4,283	117,718	2%
SMD3+	189,491	131,570	5,265	165,795	10%
All adults	4,424,243	4,424,243	139,100	4,563,343	10%
Count Version					
SMD5D0	2,975,601	3,054,295	103,391	3,023,130	
SMD5D1	1,005,525	1,022,611	20,974	1,130,252	
SMD5D2	253,625	215,767	9,469	244,165	
SMD5D3-5	189,491	131,570	5,265	165,795	

Table 4A: : Composition of overlap segments for each domain (Ever 5D)

Ever 5D	Homeless	Offending	Substance	MH	DVA
Only	54.2%	32.2%	49.5%	65.6%	56.4%
HL/Off/Subst	12.1%	17.9%	13.3%	14.9%	14.1%
MH	7.2%	10.7%	8.0%		
DVA	3.6%	5.4%	4.0%	3.7%	
SMD3+	22.9%	33.8%	25.2%	15.7%	29.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Total	434,854	294,005	394,462	631,640	337,463

Table 4A again shows the percentage composition from the viewpoint of each domain. Again, the biggest numbers are under MH but homelessness comes second now in total numbers. MH is two-thirds non-overlapping, offending only one-third, with substance and homelessness around half-and-half, and DVA slightly less overlapping. The highest overlaps with the higher complexity SMD3+ grouping are in offending, followed by DVA, which is perhaps indicative of a particular cluster of multiple disadvantages, mainly affecting women, which is distinctive from the male dominated 3D group.

5. Socio-Demographic Profile

In this section we present percentage profiles for the different SMD categories in Scotland, based on a weighted average of the relevant datasets which can be used in each case. We generally focus on two of our four classifications, Current SMD 3D (the tightest, and comparable with the original *Hard Edges*) and Ever SMD 5D, our broadest classification and roughly comparable with the *Gendered Profile* (although that omits offending as a definitional criterion). In the main published report a selected subset of these analyses are presented in Chart form.

5.1 Gender

Using the tighter Current 3D approach, most categories of SMD other than homelessness only are majority male, and the male share rises with the SMD count. This reflects the balance in combinations involving offending and/or substance misuse. This pattern is similar to previous findings for England. Under the broader Ever SMD 5D approach, three single domains are female majority, with 75% of DVA only being female. However, combinations involving DVA or MH tend to be more balanced, while the higher SMD counts, especially 3 or more domains, are still majority male (about two-thirds).

Table 5: Gender shares in SMD categories comparing Current SMD 3D with Ever SMD 5D, Scotland

	GENDER				
Current SMD 3D CATEGORIES	Male	Female	EVER SMD 5D CATEGORIES	Male	Female
No disadv	37.8%	62.1%	No Disadv	39.1%	60.8%
Homelessness only	46.4%	53.6%	Homeless only	45.9%	54.0%
Offending only	67.9%	31.6%	Offending only	74.0%	26.0%
Substance only	61.8%	38.2%	Substance only	59.3%	40.7%
			MH Only	34.4%	65.5%
			DVA Only	25.4%	74.5%
Homeless + Offending	74.4%	25.6%	2 domain neither	73.8%	26.2%
Homeless + Substance	65.7%	34.3%	2 domain inc DVA	56.3%	43.7%
Offending & Substance	74.0%	26.0%	2 domain inc MH	51.0%	48.9%
All 3 Disadv	73.3%	18.2%	SMD3+	66.6%	33.4%
Total	48.0%	52.0%	All adults	48.0%	52.0%
Count Version			Count Version		
No disadv	38.0%	61.6%	No disadv	39.3%	60.7%
SMD3D1	62.9%	37.0%	SMD5D1	56.2%	43.7%
SMD3D2	75.2%	24.8%	SMD5D2	59.8%	40.1%
SMD3D3	86.2%	13.9%	SMD5D3	66.6%	33.4%
			SMD5D4	65.5%	34.5%
			SMD5D5	70.4%	29.6%

Source: weighted combination of SCJS, GUS, PSE (Ever only), SDMD, HL1, DEST, SPS-PS

5.2 Age

Most adults experiencing SMD are in the lower-to-middle age ranges, with relatively few in the youngest (under 25) band and very few over retirement age. We can summarise differences between the SMD categories and levels by focusing on the balance between over and under 40s, as in Table 6. In the current 3D case, younger age is more associated with homelessness and substance, with SMD disadvantages in general (vs. no disadvantages), and to a small degree with multiple disadvantages.

In the Ever SMD 5D case, younger age is more associated with substance, with combinations of the original three domains, and with higher counts of SMD. Older age is a particular feature of MH only.

Table 6: Broad age shares in SMD categories comparing Current SMD 3D with Ever SMD 5D, Scotland

CURRENT SMD 3D CATEGORIES	AGE2 Under 40	Over 40	EVER SMD 5D CATEGORIES	Under 40	Over 40
No disadv	52.1%	47.9%	No Disadv	47.9%	52.1%
Homelessness only	73.3%	26.7%	Homeless only	52.6%	47.4%
Offending only	54.9%	45.0%	Offending only	42.1%	57.9%
Substance only	74.9%	25.1%	Substance only	68.9%	31.1%
			MH Only	19.0%	81.0%
			DVA Only	54.5%	45.5%
Homeless + Offending	77.2%	22.8%	2 domain neither	63.9%	36.1%
Homeless + Substance	67.3%	32.7%	2 domain inc DVA	44.7%	55.3%
Offending & Substance	79.0%	21.0%	2 domain inc MH/both	59.5%	40.5%
All 3 Disadv	73.9%	17.6%	SMD3+	63.4%	36.6%
Total	45.9%	54.1%	All adults (or hhds)	46.2%	53.8%
Count Version			*Count Version*		
No disadv	54.9%	44.8%	SMD5D0	42.4%	57.6%
SMD3D1	70.7%	29.3%	SMD5D1	57.4%	42.6%
SMD3D2	77.2%	22.8%	SMD5D2	64.8%	35.2%
SMD3D3	74.4%	18.3%	SMD5D3	67.7%	32.3%
			SMD5D4	67.0%	33.0%
			SMD5D5	57.3%	42.7%

Source: weighted combination of SCJS, GUS, PSE (Ever only), SDMD, HL1, DEST, SPS-PS

5.3 Household Type

Table 7 looks at the household type composition of SMD groups (effectively for those in private households). A broad three way classification of families, other working age and older households is used, together with separate identification of single person households.

Table 7: Broad household type shares in SMD categories comparing Current SMD 3D with Ever SMD 5D, Scotland

	HHT3			HH1
CURRENT SMD 3D CATEGORIES	Family	Wkg Age	Older	Single pers hhd
No disadv	23.3%	55.3%	21.4%	26.7%
Homelessness only	23.2%	72.2%	4.5%	63.5%
Offending only	21.0%	68.4%	10.6%	52.2%
Substance only	17.8%	81.7%	0.6%	44.4%
Homeless + Offending	10.3%	85.4%	4.3%	62.8%
Homeless + Substance	8.2%	91.0%	0.8%	64.3%
Offending & Substance	8.8%	90.1%	1.1%	54.6%
All 3 Disadv	5.8%	93.1%	0.8%	64.6%
Total	26.9%	47.8%	25.2%	15.5%
Count Version				
No disadv	23.3%	55.3%	21.4%	26.7%
SMD3D1	20.0%	78.2%	1.8%	49.7%
SMD3D2	8.8%	90.1%	1.0%	55.6%
SMD3D3	5.5%	94.3%	0.2%	76.2%

EVER SMD 5D CATEGORIES	Family	Wkg Age	Older	Single pers hhd
No Disadv	26.6%	43.7%	29.7%	19.3%
Housing only	29.9%	62.4%	7.6%	57.3%
Offending only	34.2%	56.2%	9.6%	43.5%
Substance only	23.7%	74.7%	1.7%	35.8%
MH Only	15.8%	61.1%	23.1%	43.1%
DVA Only	38.3%	45.8%	15.9%	16.4%
2 domain neither	25.1%	73.4%	1.5%	50.0%
2 domain inc DVA	48.8%	49.8%	1.5%	35.5%
2 domain inc MH/both	21.4%	76.7%	1.9%	57.1%
SMD3+	12.9%	85.5%	1.9%	69.9%
All adults	27.5%	47.6%	24.9%	15.3%
Count Version				
SMD5D0				19.2%
SMD5D1	26.5%	43.7%	29.8%	49.4%

SMD5D2	24.9%	67.4%	7.7%	47.5%
SMD5D3	24.3%	73.1%	2.5%	68.8%
SMD5D4	13.7%	84.4%	1.9%	74.8%
SMD5D5	8.1%	90.1%	1.8%	75.7%

Source: weighted combination of SCJS, PSE (Ever only), SDMD, HL1, DEST; Note: first three categories are exhaustive; single person households are a sub-set within working age.

Taking the current 3D classification, homelessness-only is the only category for which the proportion of families is approaching their overall share, at just under a quarter. The proportion of families is much less for the combination groups, at around 8-10%, dropping to 6% for cases of SMD3. Older retirement age households are also rare for any of the SMD groups, the highest being offending only at 11%. Thus, it is other working age households which dominate, and as can be seen many of these are single person households (a majority of all SMD categories except substance-only).

The Ever SMD 5D classification presents a somewhat more mixed picture. Families are quite well represented in most categories except MH-only, MH-combinations and SMD3 or higher. Older households are still relatively infrequent in most categories except MH-only and to some extent DVA-only. Single person households are generally over-represented, particularly in homeless-only, MH cases, and higher counts of SMD (3+).

For the main report this analysis is restructured into a composite estimate distinguishing single households of working age, family and other households (Figures 8a and 8b in that report).

5.4 Ethnicity

Most people in Scotland are White British and this tends to be even more the case for some SMD groups, including those with higher numbers of disadvantages. This comes out fairly clearly in the Ever SMD (5D) analysis shown in Table 8. Non-white groups overall appear to have a slightly enhanced risk of particular disadvantages of homelessness and mental ill-health, and to some extent of SMD at the level of two disadvantages. The ethnicity analysis conducted using Current SMD (3D) classification was not considered sufficiently reliable to report, owing to small numbers and incomplete recording.

Table 8: Non-white ethnic share of adults by EverSMD (5D) categories in Scotland

Ever 5D Cat	Non-White
No disadv	3.5%
H'less only	7.2%
Offend only	4.6%
Subst only	2.8%
MH Only	8.4%
DVA Only	2.7%
2 of H'less/Off/Subst	1.8%
DVA +1 Oth	5.2%
MH +1 Oth	3.5%
SMD3(+)	2.3%
No disadv	3.5%
1 disadv	5.7%
2 disadv	5.0%
3 disadv	1.9%
4 disadv	2.6%
5 disadv	3.0%
All adults	3.8%

Sources: weighted combination of SCJS, GUS, PSE, SDMD, HL1, DEST, SPS-PS

Differences within the 'Substance' group

In the main analyses here, 'Substance' is treated as one domain. It has been suggested that the 'alcohol misuse sub-group may have a different profile from the 'drug misuse' sub-group, and that, to the extent that the overall balance between these within the data as analysed may not be quite right, this could lead to misleading conclusions. However, detailed comparisons between the alcohol and drug groupings using SCJS and SHeS suggests that the differences are not very great. The alcohol group (at the harmful/dependent level, c.2.6% of adults) are somewhat older than the drug group, but with a similar predominantly male gender split. Although slightly more are married, fewer live with families and more live as single person households. Even fewer are from ethnic minorities.

5.5 Housing Tenure

Table 9 below looks at the housing tenure patterns of people in different SMD categories, recognising that particularly in the case of Current SMD 3D quite a high proportion of some groups may have no housing tenure or some 'other' form – hostel, B&B, staying with relatives or friends, and so forth. This is particularly prevalent for those in categories involving homelessness, of course, and is particularly high for SMD3.

Otherwise, home ownership is relatively uncommon for most SMD groups, except substance-only and offending-only, although even there it is still a minority tenure. The most common tenure for SMD groups is social renting, and this is especially so for offending and substance and SMD2. Private renting is more common than owning, in most cases except offending-only and substance-only, but generally less common than social renting.

Table 9: Housing Tenure by SMD categories, comparing Current SMD 3D with Ever SMD 5D, Scotland

CURRENT SMD 3D CATEGORIES	Own	Social	Priv Rent	Oth/None
No disadv	64.9%	19.9%	12.9%	2.4%
Homelessness only	7.7%	34.9%	18.4%	39.0%
Offending only	18.9%	47.7%	14.2%	19.3%
Substance only	24.9%	31.6%	23.7%	19.8%
Homeless + Offending	5.2%	41.9%	9.1%	43.8%
Homeless + Substance	5.7%	41.7%	10.6%	42.0%
Offending & Substance	6.7%	54.5%	19.3%	19.6%
All 3 Disadv	5.8%	37.9%	6.0%	50.3%
Total	62.9%	21.0%	13.2%	3.0%
Count Version				
No disadv	64.9%	19.9%	12.9%	2.4%
SMD3D1	20.2%	35.2%	18.6%	26.0%
SMD3D2	8.5%	62.4%	5.6%	23.5%
SMD3D3	0.1%	35.4%	13.2%	51.3%
EVER SMD 5D CATEGORIES	Own	Social	Priv Rent	Oth/None
No Disadv	71.0%	18.3%	10.3%	0.4%
Housing only	12.8%	29.4%	21.8%	36.0%
Offending only	21.9%	30.7%	11.4%	36.0%
Substance only	56.7%	17.2%	26.1%	0.0%
MH Only	36.2%	45.6%	13.4%	4.8%
DVA Only	56.0%	27.1%	11.9%	5.0%
2 domain neither	18.2%	33.1%	15.7%	33.0%
2 domain inc DVA	16.8%	22.9%	20.1%	40.2%
2 domain inc MH/both	20.5%	59.5%	14.6%	5.3%
SMD3+	11.3%	45.1%	13.5%	30.1%
All adults (or hhds)	62.9%	21.0%	13.2%	3.0%
Count Version				
SMD5D0	71.0%	18.3%	10.3%	0.4%
SMD5D1	29.3%	25.2%	17.7%	27.8%
SMD5D2	22.8%	40.8%	15.5%	20.8%
SMD5D3	12.0%	44.2%	14.0%	29.9%
SMD5D4	6.9%	53.7%	10.1%	29.3%
SMD5D5	4.8%	53.7%	14.3%	27.2%

Sources: based on weighted average of SCJS, GUS, HL1, DEST

The patterns for Ever SMD 5D have some similarities but with less stark differences from the household population as a whole. In this case the tenure refers to the current status whereas the SMD experiences will often have been in the past. Homeownership is relatively low for homeless- or offending-only groups, and for SMD2 and SMD3+

levels. Social renting is relatively high for most groups except substance-only and DVA-related categories. Private renting is a bit higher than average for some groups. In terms of levels, social renting rises with SMD count, as home ownership falls.

5.6 Socio-Economic Position

Employment

Table 10 starts by looking at a range of indicators relating to the world of work. The population here is all adults, including those who are retired, studying or economically inactive.

Table 10: Work-related Indicators by SMD categories, comparing Current SMD 3D with Ever SMD 5D, Scotland

CURRENT SMD 3D CATEGORIES	Work Yes	No
No disadv	60.2%	39.8%
Homelessness only	34.4%	65.6%
Offending only	45.7%	54.3%
Substance only	40.3%	59.7%
Homeless + Offending	16.1%	83.9%
Homeless + Substance	21.9%	78.1%
Offending & Substance	13.7%	86.3%
All 3 Disadv	10.1%	89.9%
Total	63.1%	36.9%
Count Version		
No disadv	60.2%	39.8%
SMD3D1	35.3%	64.7%
SMD3D2	12.5%	87.5%
SMD3D3	6.8%	93.2%

EVER SMD 5D CATEGORIES	Work Yes	No	Employ't Problems	Not Profess SEC
No Disadv	65.1%	34.9%	6.3%	54.0%
Housing only	43.7%	56.3%	20.2%	66.3%
Offending only	63.0%	37.0%	26.1%	65.4%
Substance only	56.4%	43.6%	56.2%	43.9%
MH Only	37.2%	62.8%	23.6%	75.9%
DVA Only	63.1%	36.9%	0.0%	50.7%
2 domain neither	43.1%	56.9%	60.0%	71.8%
2 domain inc DVA	67.8%	32.2%	8.7%	55.4%
2 domain inc MH/both	28.5%	71.5%	56.1%	79.6%
SMD3+	23.3%	76.7%	70.8%	79.5%
All adults (or hhds)	63.1%	36.9%	13.5%	56.5%
Count Version				
SMD5D0	65.3%	34.7%	13.5%	53.4%
SMD5D1	42.0%	58.0%	44.5%	58.2%
SMD5D2	33.4%	66.6%	58.3%	63.1%
SMD5D3	23.8%	76.2%	70.7%	79.7%
SMD5D4	21.5%	78.5%	70.5%	81.4%
SMD5D5	24.9%	75.1%	68.9%	87.5%

Sources: cols 1&2: weighted combination of SCJS, GUS, PSE (Ever only), SDMD, DEST;; col 3: SDMD, PSE, DEST;. col.4 : SCJS, GUS

Note: employment problems include job, pay or hours loss, period of unemployment last year, on out of work benefit, etc.; low scores for employment problems against DVA categories reflects non-inclusion of this flag in SDMD and small sample numbers in PSE and Destitution surveys.

Broadly, these indicators tell a pretty consistent story. Adults experiencing current SMD, even at the level of one disadvantage, have a significantly lower rate of being in work, while for those with two or three disadvantages these rates fall to somewhere in the range 10-20%, compared with 63% of all adults in private households. When we shift the focus onto Ever SMD (5D), the current work picture is less starkly negative. Adults with MH or homelessness experience in the background have lower employment rates, while this does not appear to be the case for those with DVA background. Having experienced three or more disadvantages in the past is associated with a pretty low employment rate of 23%.

A composite measure of recent or current employment/unemployment problems shows higher scores for adults with all past single SMD issues except DVA, but particularly with substance misuse. Majorities of those reporting two or more of the 3D disadvantages had recent employment problems; combinations with MH problems or three or more past disadvantages also report such employment problems recently. In addition, the occupational profile of most SMD groups is lower than average (measured by non-professional occupations), but exceptions are those reporting substance-only or DVA in the past. 80% of SMD3+ have a non-professional occupation.

Poverty

We now consider the relationship between SMD and poverty. Table 11 presents a range of poverty indicators across the standard two sets of SMD categories.

Table 11: Poverty Indicators by SMD categories, comparing Current SMD 3D with Ever SMD 5D, Scotland

CURRENT SMD 3D CATEGORIES	Low Inc Yes	No	No Car			
No disadv	34.7%	65.3%	21.6%			
Homelessness only	67.0%	33.0%	57.6%			
Offending only	48.8%	51.2%	44.8%			
Substance only	43.4%	56.6%	35.1%			
Homeless + Offending	76.1%	23.9%	80.1%			
Homeless + Substance	60.4%	39.6%	55.1%			
Offending & Substance	79.5%	20.5%	80.1%			
All 3 Disadv	61.8%	38.2%	55.1%			
Total	22.1%	77.9%	22.8%			
Count Version						
No disadv	34.8%	65.2%	21.6%			
SMD3D1	53.6%	46.4%	43.6%			
SMD3D2	73.9%	26.1%	72.5%			
SMD3D3	69.4%	30.6%	70.6%			
EVER SMD 5D CATEGORIES	Low Inc Yes	No	No Car	Mater Depriv	Fin Stress /Debt	Sev Pov/ Destitution
No Disadv	17.2%	82.8%	18.8%	13.1%	21.9%	0.8%
Housing only	39.2%	60.8%	39.8%	30.2%	27.0%	6.3%
Offending only	45.0%	55.0%	24.5%	34.5%	50.4%	9.1%
Substance only	25.7%	74.3%	19.5%	28.1%	26.3%	5.6%
MH Only	50.1%	49.9%	34.9%	33.8%	42.9%	4.0%
DVA Only	27.5%	72.5%	23.6%	0.0%	32.8%	0.0%
2 domain neither	28.7%	71.3%	49.4%	45.1%	50.4%	1.6%
2 domain inc DVA	51.2%	48.8%	37.8%	14.8%	47.8%	3.0%
2 domain inc MH/both	54.2%	45.8%	55.9%	54.1%	64.7%	8.0%
SMD3+	54.4%	45.6%	59.2%	66.1%	79.1%	25.1%
All adults (or hhds)	22.1%	77.9%	22.8%	23.7%	28.3%	3.7%
Count Version						
SMD5D0	16.6%	83.4%	18.1%	13.1%	21.9%	0.8%
SMD5D1	33.4%	66.6%	27.7%	32.6%	38.9%	5.5%
SMD5D2	39.0%	61.0%	39.6%	52.6%	63.2%	7.4%
SMD5D3	53.9%	46.1%	58.0%	66.3%	78.8%	25.2%
SMD5D4	59.2%	40.8%	69.6%	64.4%	80.4%	24.8%
SMD5D5	63.8%	36.2%	80.0%	65.7%	82.2%	25.0%

Sources: cols 1&2: weighted combination of SCJS, GUS, PSE (Ever only), SDMD, DEST;; col 3: SCJS & GUS; Col 3-5 PSE, DEST. col.4-5: PSE & DEST

Note: 'Low Inc' means bottom quintile of (equivalised net) income; 'No Car' means household without use of car or van; 'Mater Depriv' means lacking 3 or more of PSE essentials or 2 or more of

Destitution essentials; 'Fin Stress/Debt' means falling behind on bills or having problem debt; 'Sev Pov/Destitution' is as defined in 'Destitution' study, see Bramley et al 2018.

The low income indicator essentially focuses on the bottom quintile of equivalised income, or a similar measure, and draws on 5 datasets. Looking at current SMD 3D, all the categories show markedly higher shares than adults with no disadvantages, ranging from 43% for substance-only to 80% for offending and substance. The measure rises sharply up to SMD2. When looking at current low income in relation to past experiences across the 5D spectrum, for all specific groups current share of low incomes exceeds 26%, with 50% of MH-only on low income, and 50-55% of several of the multiple groups.

These patterns are consistently confirmed by four other measures of material poverty. Having no car rises from 23% of all households to 71-72% of current SMD2/3 (current 3D) and 80% of two particular combinations of offending with homelessness and substance. Across Ever SMD 5D, no car rises from 19% of those with no disadvantages to 40% of those with past homelessness, 49% of those with 2 out of 3 of the '3D' set, 56% of combinations with MH, and 59% of those with 3 or more past disadvantages, or 70% of SMD4.

The remaining three measures are only analysed across the Ever SMD (5D) classification. Material deprivation combined with lower income ('PSE poverty') shows similar patterns, rising from 13% of those with no past disadvantages to 66% of those with three or more, with high rates for combinations involving MH, homelessness and/or offending. However, DVA-only or DVA plus one other disadvantage appear to be associated with lower than average material deprivation (but samples are small). Financial stress and debt rises from 22% to 79%, with high rates for offending-only and combinations involving MH. Finally, a measure of severe poverty/destitution, derived from the Destitution studies but also using PSE data, rises from 0.8% of those with no disadvantages to 25% of those with past experiences of three or more. Rates are also quite high (8-9%) for those experiencing offending-only, and 2 disadvantages including MH.

This evidence of strong relationships with multiple measures of poverty and material deprivation, including destitution, both in the current period but also in the aftermath of SMD experiences, is a very powerful and significant finding. However, the apparent finding that past DVA is very often not associated with these economic disadvantages is also quite striking, and has some echoes of findings from the Gendered Profile in England, although caution is needed about small samples in some datasets. .

While it is clear that there are very strong relationships between most manifestations of SMD and poverty, more care is needed in drawing inferences from this about causality. There are many grounds for thinking that causality runs in both directions, with past and current poverty increasing the risks of some forms of SMD (e.g. homelessness, MH brought on by the stresses of joblessness, debt or living on a very low or uncertain income) at the same time that SMD itself (addictions, criminal record, chaotic lifestyle) reinforces poverty through worklessness, domestic conflict, benefit sanctions, etc. With current SMD, in particular, one may suggest such two-way

causation. With ‘Ever SMD’, then the implication tends to be more towards SMD causing or reinforcing current poverty. However, in later sections of this report we will also look at evidence (e.g. from PSE or GUS), in the context of considering outcomes, which supports arguments that past poverty plays a role in generating current SMD.

Poor neighbourhoods

Table 12 looks at the pattern in terms of current residence in relatively poor/deprived neighbourhoods, again using the Ever SMD (5D) classification. While not as strong as the relationships revealed for individual poverty measures, there is still clearly a pattern whereby higher levels of SMD are associated with a greater propensity to live in the poorest 40% of small areas (DataZones), with the proportion doubling between ‘No disadvantages’ and SMD3+. There is a stronger relationship in terms of the chances of living in the poorest 10/15% of DZs, with the proportion of past SMD3+ cases living in such areas being four times the proportion for those with no disadvantages. Offending and MH seem to be the domains more associated with this tendency, and again, DVA seems to be the exception to this pattern.

Table 12: Residence in Poorer or Poorest Neighbourhoods by Ever SMD 5D categories, Scotland

EVER SMD 5D CATEGORIES	Most Dep 40% DZs	Most Dep 10/15%
No Disadv	26.1%	9.3%
Housing only	48.2%	13.7%
Offending only	38.4%	36.5%
Substance only	28.9%	5.3%
MH Only	40.5%	22.7%
DVA Only	31.3%	7.8%
2 domain neither	48.8%	18.6%
2 domain inc DVA	38.0%	4.3%
2 domain inc MH/both	53.5%	22.1%
SMD3+	53.4%	37.4%
All adults (or hhds)	29.5%	12.9%
Count Version		
SMD5D0	25.8%	9.0%
SMD5D1	34.9%	18.8%
SMD5D2	43.0%	21.8%
SMD5D3	52.7%	37.3%
SMD5D4	58.5%	41.5%
SMD5D5	60.0%	28.9%

Sources: weighted combinations for SCJS & GUS (col 1); PSE & GUS (col 2).

Again, as with individual or household poverty, we should sound a cautionary note about causality vs association. While there may be ‘area effects’ which cause or

reinforce the risks of SMD (e.g. young people becoming involved with crime or drugs through local associates or gangs), there will also be quite a strong 'selection effect', whereby people who have SMD, or are just poor, are more likely to end up (though housing allocation processes, whether in the social or private sectors) in such neighbourhoods.

Housing deprivations

For the final table in this section (Table 13) we look at indicators of housing deprivation, firstly a composite indicator of housing needs[18] and secondly a measure of rough sleeping (in last year in Destitution and HL1 sources, 'Ever' in PSE). Housing deprivations rise quite sharply from 13% of households with no disadvantages to 35% of those reporting past homelessness, 45% of those reporting two disadvantages (but not apparently DVA, although this is affected by small samples), and 65% of those with three or more. Rough sleeping rates are generally lower, and effectively zero for those with no past disadvantages, but rising steeply with previous experience of homelessness but more especially combinations involving the traditional SMD 3D and three or more of the five domains. Nearly two in five of the SMD3+ group have experienced rough sleeping.

[18] The PSE measure is a composite of standard housing need indicators including concealed and sharing households, households with affordability and security problems, overcrowding, suitability and condition problems. The Destitution measure is really capturing elements of 'core homelessness' including staying in hostels, temporary accommodation or sofa surfing with friends/relatives.

Table 13: Housing and Homelessness Indicators by Ever SMD 5D categories, Scotland

EVER SMD 5D CATEGORIES	Housing Depriv	Rough Sleep
No Disadv	13.0%	0.0%
Housing only	35.3%	7.9%
Offending only	23.8%	0.0%
Substance only	0.0%	0.0%
MH Only	16.6%	0.0%
DVA Only	0.0%	0.0%
2 domain neither	45.3%	22.3%
2 domain inc DVA	9.8%	2.7%
2 domain inc MH/both	48.0%	10.0%
SMD3+	64.8%	39.3%
All adults (or households)	17.8%	6.1%
Count Version		
SMD5D0	13.0%	0.0%
SMD5D1	31.0%	5.1%
SMD5D2	44.4%	12.0%
SMD5D3	64.3%	38.4%
SMD5D4	68.6%	37.0%
SMD5D5	68.1%	36.2%

Before leaving socio-economic profile, we can comment briefly on any differences observed between the drug and alcohol sub-domains (based mainly on SCJS data). Generally the alcohol misuse use group are similar to the drug misuse group in terms of their degree of low income poverty, lower occupational category, and presence in poorer neighbourhoods. They are somewhat more likely to be in work, and slightly more likely to live in social rented housing.

6. Geography of SMD

6.1 Urban-Rural differences

Scotland is a predominantly urban country, so far as where people live, but this is even more true for those experiencing SMD. Looking in Table 14 at current SMD 3D, the proportion of rural residents is significantly less in most SMD groups except possibly offending..

Table 14: Urban-Rural balance by SMD categories, comparing Current SMD 3D with Ever SMD 5D, Scotland

CURRENT SMD 3D CATEGORIES	Urban	Rural	EVER SMD 5D CATEGORIES	Urban	Rural
No disadv	81.8%	18.3%	No Disadv	79.4%	20.6%
Homelessness only	85.2%	14.8%	Housing only	83.3%	16.7%
Offending only	82.5%	17.6%	Offending only	87.0%	13.0%
Substance only	89.5%	10.5%	Substance only	79.6%	20.5%
Homeless + Offending	95.6%	4.4%	MH Only	84.8%	15.2%
Homeless + Substance	95.6%	4.4%	DVA Only	72.5%	27.5%
Offending & Substance	83.1%	16.9%	2 domain neither	84.9%	15.1%
All 3 Disadv	94.1%	5.9%	2 domain inc DVA	49.4%	50.6%
Total	82.0%	18.0%	2 domain inc MH/both	88.6%	11.4%
			SMD3+	91.3%	8.2%
			All adults (or hhds)	80.8%	19.2%
Count Version			Count Version		
No disadv	81.8%	18.3%	SMD5D0	79.2%	20.8%
SMD3D1	88.1%	12.0%	SMD5D1	83.0%	17.0%
SMD3D2	89.3%	10.8%	SMD5D2	85.2%	14.8%
SMD3D3	94.1%	5.9%	SMD5D3	92.2%	7.8%
			SMD5D4	87.9%	12.1%
			SMD5D5	93.0%	7.0%

Sources: based on weighted average of SCJS, GUS and PSE (Ever 5D only)

In the case of Ever SMD 5D, adults categories involving DVA seem to be more likely to be located in rural Scotland, but this apparent difference may not be statistically robust. . However, rural location is less common for other cases including offending, MH and other multiple disadvantage categories.

6.2 Local Authority level analysis

In preceding sections we presented evidence that there are certain general geographical patterns in the incidence of SMD, namely some tendency for rates to be higher in urban and lower in rural areas, and a more pronounced tendency for rates to be higher in poorer and more deprived neighbourhoods. We can now complement this by providing an analysis of SMD rates at local authority level[19].

The analysis summarised in Table 15 is based on four datasets, one sample survey (SCJS) and three administrative datasets covering the three key domains of homelessness (HL1), offending (CP) and substance misuse (SDMD). These datasets were used as they either had local authority indicators attached, or were published at that level, and because they were seen as more robust at this level. Three are administrative datasets including all cases using the relevant services, while the other is a sample survey pooled across two waves. For some of these sources the island authorities are treated as one group, as are a couple of small low-incidence local authorities. Indicators from each source have been compared and scaled for consistency with the main estimated 'numbers' reported earlier. Two indicators are highlighted, first the 'classic' current SMD3D for cases with 2 or 3 disadvantages, and the wider current SMD5D cases with 2 or more disadvantages. Both are expressed as rates per 1000 adult population. The left hand side of the table shows authorities in conventional alphabetical order, while the right hand side shows them in descending order on the first measure.

The range of variation on the first indicator is wider, with the highest authority having a rate 4.1 times that of the lowest, whereas this range of variation on the second indicator is only 3.0 times. This reflects both the wider extent and scope of MH problems and the tendency, already noted, for DVA to be less strongly associated with poverty. .

Some may be surprised to note that Glasgow City does not score highest in terms of rates on either of these indicators; it comes third behind Clackmannanshire and West Dunbartonshire on both measures. Clearly, Glasgow has the largest number of adults with SMD, but its rates are slightly lower, perhaps, because it is a large authority with more diversity of areas and populations within it. Other high scoring authorities are Dundee City and both East and North Ayrshire. West Lothian's score seems surprisingly high, whereas Inverclyde is perhaps more similar to the other high scoring authorities. Aberdeen City seems to score considerably higher than Edinburgh on the 3D measure, which also seems a little surprising, although Edinburgh scores rather higher on the 5D measure.

Authorities at the bottom of the list are, unsurprisingly, the island authorities, the affluent suburban districts and the Highlands.

[19] While in principle some administrative datasets may permit analysis at a lower level of geography, by using postcodes or other address data, this is fairly problematic in this case. Many homeless people do not have a fixed place of living, or may be staying in a location other than their place of origin or longer term destination. Prison exit survey data includes postcodes for some cases but with many missing or incomplete, but cannot be linked to the main prisoner survey, while detailed community sentence cases were not analysed in this level of detail. We therefore focus on the Local Authority as the lowest geographical level of analysis.

Components of SMD

The method used to estimate SMD numbers at LA level can be disaggregated down to show estimates for each category in the two classifications (Current SMD(3D) and Current (5D)) used, making various apportionments and logical assumptions, and averaging estimates for groups identified in multiple datasets. This was done first for the six case studies, to inform preparation for qualitative case study fieldwork, and then extended to all the authorities. The usual caveats apply to these estimates, that they are subject to margins of error due to sampling and incomplete information, as well as the inconsistency between different localities in how certain services are provided and information recorded.

These local estimates can be presented in tabular form and also as bar charts. Table 16A shows the analysis in terms of numbers for all the local authorities in alphabetic order. Table 16B shows it in terms of rates (percent of adult population).

Arguably the most effective presentation of these estimates is graphical, using ordered stacked bars, as presented in the main report. This is a good way of summarising the range of variation in scale and intensity and also the mix of problems. Presenting these estimates as rates shows the relative intensity and highlights problems in some areas of relative economic weakness like West Dunbartonshire, Clackmannanshire, Dundee and North Ayrshire. Showing the single domain bars as well shows how much 'homelessness only' there is in Edinburgh and Lothians. Presenting these findings as absolute numbers is also important to make the point about how much of the overall problem is in Glasgow (17%). The four cities plus Fife plus the two Lanarkshires account for 53% of the total number of SMD2/3 adults in Scotland.

These numbers can also be expressed as percentages of people with particular problems e.g. homelessness, who have the other problems. But it should be borne in mind there is some second order estimation and controlling going on to get to these figures at LA level.

Table 15: Current SMD rates for two or more disadvantages using 3D and 5D measures by Local Authority, per 1000 adult population.

Alphabetical order LA Name	Trad SMD SMD3D23	Current SMD5D2+	Ranked LA Name	Trad SMD SMD3D23	Current SMD5D2+
Aberdeen City	9.50	16.9	Clackmannanshire	13.05	25.1
Aberdeenshire	4.15	11.6	West Dunbartonshire	12.80	36.0
Angus	7.67	17.6	Glasgow City	11.55	24.9
Argyll & Bute	6.14	9.7	East Ayrshire	11.46	18.8
Clackmannanshire	13.05	25.1	Dundee City	11.39	24.2
Dumfries & Galloway	6.78	16.9	North Ayrshire	11.27	23.4
Dundee City	11.39	24.2	West Lothian	9.90	20.8
East Ayrshire	11.46	18.8	Aberdeen City	9.50	16.9
East Dunbartonshire	3.66	11.1	Inverclyde	9.23	18.1
East Lothian	4.89	14.4	Fife	8.24	19.0
East Renfrewshire	4.86	11.9	Angus	7.67	17.6
Edinburgh	6.46	20.0	Renfrewshire	7.61	16.3
Eilean Siar	3.21	8.4	South Lanarkshire	7.48	17.0
Falkirk	7.05	15.4	Scottish Borders	7.28	14.4
Fife	8.24	19.0	North Lanarkshire	7.24	17.5
Glasgow City	11.55	24.9	Falkirk	7.05	15.4
Highland	4.92	11.2	Dumfries & Galloway	6.78	16.9
Inverclyde	9.23	18.1	Edinburgh	6.46	20.0
Midlothian	5.00	12.2	Argyll & Bute	6.14	9.7
Moray	5.33	12.5	Perth & Kinross	6.01	14.0
North Ayrshire	11.27	23.4	South Ayrshire	5.69	15.4
North Lanarkshire	7.24	17.5	Stirling	5.59	15.2
Orkney	3.66	9.4	Moray	5.33	12.5
Perth & Kinross	6.01	14.0	Midlothian	5.00	12.2
Renfrewshire	7.61	16.3	Highland	4.92	11.2
Scottish Borders	7.28	14.4	East Lothian	4.89	14.4
Shetland	3.93	7.8	East Renfrewshire	4.86	11.9
South Ayrshire	5.69	15.4	Aberdeenshire	4.15	11.6
South Lanarkshire	7.48	17.0	Shetland	3.93	7.8
Stirling	5.59	15.2	East Dunbartonshire	3.66	11.1
West Dunbartonshire	12.80	36.0	Orkney	3.66	9.4
West Lothian	9.90	20.8	Eilean Siar	3.21	8.4
Scotland	7.63	17.8	Scotland	7.63	17.8

Sources: Current SMD3D2 based on SCJS, SDMD, HL1 & CP Stats; Current SMD5D2 based on SCJS, SDMD & HL1

Table 16A: :Estimated current numbers by SMD categories for all Scottish local authorities

Estimated Numbers* incl some not rec serv	Homeless only	Offending only	Substance only	H'less + Offending	H'less + Substance	Subst + Offending	All 3	H'less & & DVA	H'less & MH
LA	HLess only	Off only	Subst only	Hless+Off	Hless+Subst	Subst+Off	SMD3		
Aberdeen City	1,466	2,404	3,474	470	413	590	443	430	389
Aberdeenshire	2,052	1,422	2,032	198	213	303	188	326	382
Angus	1,367	488	867	281	154	220	79	270	278
Argyll & Bute	671	270	360	123	109	156	44	85	130
Clackmannanshire	658	538	790	160	127	181	63	122	278
Dumfries & Galloway	788	953	1,552	168	208	297	214	263	463
Dundee City	1,663	1,988	2,803	275	361	515	341	330	741
East Ayrshire	231	929	2,759	111	156	445	149	130	315
East Dunbartonshire	1,104	316	581	150	59	84	17	293	145
East Lothian	1,421	366	1,116	60	113	162	70	300	278
East Renfrewshire	687	250	486	206	54	77	12	111	248
Edinburgh	7,958	2,141	6,413	409	723	1,033	657	1,052	1,927
Eilean Siar	283	88	163	12	20	29	11	56	96
Falkirk	1,645	1,177	1,801	127	250	357	150	656	126
Fife	3,392	2,679	7,861	510	650	927	405	674	956
Glasgow City	9,287	3,959	10,218	1,740	1,284	1,833	799	1,049	3,209
Highland	1,994	1,129	1,074	260	223	318	129	326	356
Inverclyde	80	521	1,267	35	90	257	81	67	182
Midlothian	1,220	550	601	72	90	129	38	319	122
Moray	735	595	468	83	108	154	42	137	300
North Ayrshire	789	694	3,287	287	324	463	187	296	489
North Lanarkshire	2,674	3,120	3,838	530	480	685	238	522	1,345
Orkney	186	89	129	25	13	19	9	52	93
Perth & Kinross	1,474	929	1,134	217	178	255	104	337	396

Renfrewshire	992	841	2,376	303	253	361	225	222	563
Scottish Borders	1,114	255	1,164	264	137	196	77	237	411
Shetland	265	177	129	15	20	28	9	26	93
South Ayrshire	1,369	683	1,570	231	97	139	126	200	226
South Lanarkshire	3,494	2,088	3,140	692	415	592	194	674	648
Stirling	625	487	898	82	105	150	136	174	78
West Dunbartonshire	1,833	660	1,922	136	252	360	273	541	752
West Lothian	1,777	1,021	3,330	153	419	598	162	282	723
Scotland	55,293	33,809	69,604	8,385	8,100	11,911	5,670	10,560	16,737

Table 16B: :Estimated rates by SMD categories for all Scottish local authorities (percent of adult population)

Estimated Rates % adult population	Homeless only	Offending only	Substance only	H'less + Offending	H'less + Substance	Subst + Offending	All 3	H'less & & DVA	H'less & MH
LA	HLess only	Off only	Subst only	Hless+Off	Hless+Subst	Subst+Off	SMD3	HLess+DVA	HLess+MH
Aberdeen City	0.75	1.23	1.78	0.24	0.21	0.30	0.23	0.22	0.20
Aberdeenshire	0.97	0.67	0.96	0.09	0.10	0.14	0.09	0.15	0.18
Angus	1.41	0.50	0.89	0.29	0.16	0.23	0.08	0.28	0.29
Argyll & Bute	0.91	0.36	0.49	0.17	0.15	0.21	0.06	0.12	0.18
Clackmannanshire	1.56	1.28	1.88	0.38	0.30	0.43	0.15	0.29	0.66
Dumfries & Galloway	0.63	0.76	1.23	0.13	0.17	0.24	0.17	0.21	0.37
Dundee City	1.34	1.60	2.25	0.22	0.29	0.41	0.27	0.26	0.60
East Ayrshire	0.23	0.92	2.73	0.11	0.15	0.44	0.15	0.13	0.31
East Dunbartonshire	1.25	0.36	0.66	0.17	0.07	0.10	0.02	0.33	0.16
East Lothian	1.71	0.44	1.34	0.07	0.14	0.19	0.08	0.36	0.33
East Renfrewshire	0.93	0.34	0.66	0.28	0.07	0.10	0.02	0.15	0.33
Edinburgh	1.91	0.51	1.54	0.10	0.17	0.25	0.16	0.25	0.46
Eilean Siar	1.24	0.38	0.71	0.05	0.09	0.13	0.05	0.24	0.42
Falkirk	1.27	0.91	1.39	0.10	0.19	0.28	0.12	0.51	0.10
Fife	1.12	0.88	2.59	0.17	0.21	0.31	0.13	0.22	0.32
Glasgow City	1.85	0.79	2.03	0.35	0.26	0.36	0.16	0.21	0.64
Highland	1.03	0.59	0.56	0.13	0.12	0.16	0.07	0.17	0.18
Inverclyde	0.12	0.78	1.90	0.05	0.14	0.39	0.12	0.10	0.27
Midlothian	1.75	0.79	0.86	0.10	0.13	0.18	0.05	0.46	0.18
Moray	0.94	0.76	0.60	0.11	0.14	0.20	0.05	0.18	0.38
North Ayrshire	0.70	0.61	2.91	0.25	0.29	0.41	0.16	0.26	0.43
North Lanarkshire	0.97	1.14	1.40	0.19	0.17	0.25	0.09	0.19	0.49
Orkney	1.03	0.49	0.71	0.14	0.07	0.11	0.05	0.29	0.51
Perth & Kinross	1.19	0.75	0.91	0.17	0.14	0.20	0.08	0.27	0.32

Renfrewshire	0.69	0.58	1.65	0.21	0.18	0.25	0.16	0.15	0.39
Scottish Borders	1.17	0.27	1.23	0.28	0.14	0.21	0.08	0.25	0.43
Shetland	1.40	0.93	0.68	0.08	0.10	0.15	0.05	0.14	0.49
South Ayrshire	1.45	0.72	1.66	0.24	0.10	0.15	0.13	0.21	0.24
South Lanarkshire	1.34	0.80	1.21	0.27	0.16	0.23	0.07	0.26	0.25
Stirling	0.82	0.64	1.18	0.11	0.14	0.20	0.18	0.23	0.10
West Dunbartonshire	2.48	0.89	2.60	0.18	0.34	0.49	0.37	0.73	1.02
West Lothian	1.25	0.72	2.34	0.11	0.30	0.42	0.11	0.20	0.51
Scotland	1.25	0.76	1.57	0.19	0.18	0.27	0.13	0.24	0.38

6.3 Changes in SMD by Local Authority

We are also able to look at change in SMD by local authority, between the late 2000s and the early/mid 2010s, using at least two administrative datasets. Table 17 looks at changes recorded in numbers of drug treatment cases broken down by number of SMD domains under two classifications (3D and 4D, the latter including mental health but not DVA). In relation to the classic 3D typology, there has been a greater increase in substance-only than in the combinations with homelessness and offending. However, using the wider 4D classification including MH, the larger increase is in SMD involving three or more deprivations.

It should be noted that some changes recorded in these tables may have been affected by changes in coverage of SDMD in certain Health Board areas in some years[20].

[20] For further details see Information Services Division (2016) *Scottish Drug Misuse Database: Overview of Initial Assessments for Specialist Drug Treatment 2014/15*.

Table 17: Changes in substance treatment numbers by SMD level (3D and 4D) by local authority, 2008-11 to 2012-15

LA Name	Changes Substance only	Subst + 1 other disadv	Subst + Offend + H'less	Subst only (of 4)	Subst + 1 other	Subst + 2 other
Aberdeen City	89%	36%	97%	37%	58%	139%
Aberdeenshire	23%	8%	27%	-8%	29%	44%
Angus	47%	-18%	19%	20%	-4%	25%
Argyll & Bute	-38%	-39%	-46%	-42%	-39%	-36%
Clackmannanshire	16%	23%	83%	-33%	37%	110%
Dumfries & Galloway	106%	53%	134%	66%	84%	107%
Dundee City	-20%	-7%	-42%	-36%	-2%	-19%
East Ayrshire	-13%	61%	21%	-11%	28%	32%
East Dunbartonshire	0%	-30%	-12%	-18%	0%	-25%
East Lothian	113%	44%	28%	112%	67%	40%
East Renfrewshire	0%	-30%	-12%	-18%	0%	-25%
Edinburgh	27%	-7%	-28%	21%	1%	1%
Eilean Siar	-30%	-12%	19%	-44%	-16%	22%
Falkirk	42%	41%	39%	-10%	53%	110%
Fife	62%	31%	5%	77%	27%	20%
Glasgow City	56%	32%	-5%	45%	36%	44%
Highland	4%	3%	44%	-14%	2%	45%
Inverclyde	-20%	-10%	-7%	-38%	-16%	29%
Midlothian	113%	44%	28%	112%	67%	40%
Moray	-16%	-29%	-38%	-14%	-31%	-26%
North Ayrshire	-22%	30%	36%	-14%	12%	-3%
North Lanarkshire	40%	48%	73%	31%	45%	76%
Orkney	-30%	-12%	19%	-44%	-16%	22%
Perth & Kinross	206%	36%	-30%	201%	49%	16%
Renfrewshire	-8%	10%	25%	-2%	2%	13%
Scottish Borders	-18%	-5%	-15%	-13%	-13%	-16%
Shetland	-30%	-12%	19%	-44%	-16%	22%
South Ayrshire	26%	50%	22%	41%	29%	34%
South Lanarkshire	40%	48%	73%	31%	45%	76%
Stirling	30%	31%	6%	-19%	39%	60%
West Dunbartonshire	-1%	-24%	12%	-29%	-10%	9%
West Lothian	4%	0%	25%	-24%	14%	42%
Scotland	28%	17%	12%	17%	21%	33%

Although there is a somewhatstriking degree of variation between local authorities in the patterns of change, for reasons just mentioned these should be treated with caution. For example Glasgow sees quite large apparent rises in most categories, whereas Edinburgh sees reductions in some. It is not immediately obvious what 'common factors' link authorities showing strong increases, or those with big

decreases. For example West Dunbartonshire shows falling numbers, as does Dundee and Inverclyde, but Clackmannanshire, Fife, Aberdeen, Lanarkshire show big increases. Some but not all of the authorities with falling numbers are more affluent suburban or rural areas, e.g. Argyll & Bute, East Dunbs/East Renfs, Scottish Borders. This suggests that it is possible that idiosyncratic local variations in service provision, as well as changes in data coverage, have a significant impact.

We can also look at changes in HL1-based homelessness-based SMD data between the period 2007-10 and 2013-17, as summarised in Table 17. We present three SMD measures – combinations of 2 or 3 of the 3D definition, and combinations of either DVA or MH with homelessness - together with an overall homelessness change measure. The overall national picture is one of reductions in the annual flow of cases in all of these categories, with the greatest reduction in the overall homelessness figure (-31%), smaller reductions in SMD2/3 (-21%) and homelessness with DV (-24%), and only a very small fall in homelessness with MH (-3%). Again there is wide variation between individual local authorities, but this does not correlate that closely with that found from SDMD.

Taking an average across the three SMD measures one can say that nearly half of local authorities saw an increase. This includes two of the major cities (Aberdeen and Dundee), one or two relatively poor authorities (e.g. West Dunbartonshire) but otherwise a range of authorities which could be characterised as relatively affluent or better off, including a number of island and rural areas. There does not seem to be much correlation with the pattern of changes found with the SDMD data. For example, the following authorities showed increases in SMD in SDMD but reductions in HL1 – East Ayrshire, Glasgow, Highland, North Lanarkshire, Stirling. Authorities which showed the opposite combination (down in SDMD, up in HL1) included Dundee, East Dunbartonshire, East Renfrewshire, and Moray.

It is perhaps worth noting that in the 2019 *Homelessness Monitor Scotland* report (Fitzpatrick et al 2019, p.69) it was observed that there was a picture of change in homeless applications across Scotlish local authorities, albeit for a slight more recent period (2014/15-2017/18), which also showed no coherent pattern.

*Table 18: Changes in Homeless Cases and SMD combinations involving homelessness by Local Authority, 2013-17 compared with 2007-*13
(percent change in number, on annualised basis)

LA Name	SMD2/3	HL+DV	HL+MH	All HL
Aberdeen City	48%	10%	-28%	-37%
Aberdeenshire	6%	-3%	9%	-13%
Angus	-7%	7%	-40%	-32%
Argyll & Bute	-57%	-34%	-67%	-48%
Clackmannanshire	-6%	-27%	25%	-26%
Dumfries & Galloway	-24%	-28%	-17%	-45%
Dundee City	-3%	100%	29%	-33%
East Ayrshire	-41%	-29%	1%	-44%
East Dunbartonshire	78%	6%	72%	-10%
East Lothian	-25%	-5%	-12%	-27%
East Renfrewshire	41%	18%	139%	9%
Edinburgh	-46%	-28%	-25%	-23%
Eilean Siar	-29%	13%	30%	-27%
Falkirk	-77%	-57%	-77%	-56%
Fife	-19%	11%	19%	-19%
Glasgow City	-24%	-41%	-2%	-37%
Highland	-49%	-34%	-50%	-47%
Inverclyde	-32%	-52%	-33%	-44%
Midlothian	7%	1%	-27%	-14%
Moray	25%	-23%	84%	-38%
North Ayrshire	-20%	-35%	-36%	-31%
North Lanarkshire	0%	-52%	33%	-42%
Orkney	9%	31%	134%	3%
Perth & Kinross	-19%	63%	36%	-9%
Renfrewshire	4%	-44%	27%	-29%
Scottish Borders	-18%	-6%	-2%	-29%
Shetland	-3%	-42%	70%	-27%
South Ayrshire	42%	-1%	4%	-6%
South Lanarkshire	35%	-18%	13%	-28%
Stirling	-57%	-43%	-69%	-36%
West Dunbartonshire	-21%	-27%	138%	-17%
West Lothian	-8%	-24%	129%	-17%
Scotland	-21%	-24%	-3%	-31%

7. Quality of Life

In this section we present a range of evidence on the quality of life of adults who are experiencing or have experienced SMD. This covers the broad general areas of disability and health, crime and harm, housing and neighbourhood quality, social exclusion and personal wellbeing. It would ideally be possible to report equally on the quality of life of those adults currently experiencing multiple disadvantages and those of adults with past experiences. However, in practice the main sources we have for these indicators are household surveys and these are less effective at covering current SMD, (a) because they omit the non-household and some transient populations, and (b) because of sample size restrictions.

7.1 Health and Disability

There is a degree of similarity between the long term limiting illness/disability indicators and the subjective poor (bad or very bad) health indicator. In general, SMD is associated with much higher levels of both indicators, which is shown more clearly from the count versions at the bottom of Table 19. For current SMD (3D), these much (four times) higher rates are associated with the homelessness and offending domains, as well as SMD2 and SMD3, but much less with the substance-only category. The strong association with homelessness is consistent with the strong relationships found for many health conditions in the HHiS study .

Table 19: Indicators of disability and poor health by SMD Categories

CURRENT SMD 3D CATEGORIES	Long term Limiting ill-ness/disab	Poor Health	EVER SMD 5D CATEGORIES	Long term Limiting ill ness/disab	Poor Health
No disadv	5.6%	4.7%	No Disadv	5.2%	4.5%
Homelessness only	20.7%	18.8%	Housing only	11.6%	10.8%
Offending only	19.3%	14.8%	Offending only	6.2%	3.3%
Substance only	8.7%	5.4%	Substance only	1.1%	3.3%
Homeless + Offend	21.4%	23.5%	MH Only	32.0%	28.7%
Homeless + Subst	25.3%	23.5%	DVA Only	4.6%	2.7%
Offending & Subst	27.0%	23.5%	2 domain neither	5.7%	4.5%
All 3 Disadv	16.9%	23.5%	2 domain inc DVA	14.7%	14.2%
			2 domain inc MH/both	24.7%	20.0%
			SMD3+	16.2%	9.3%
Total	7.0%	5.9%%	All adults	7.0%	6.0%
Count Version			*Count Version*		
No disadv	5.7%	5.3%	SMD5D0	4.6%	4.1%
SMD3D1	13.7%	11.7%	SMD5D1	13.3%	12.1%
SMD3D2	20.6%	22.1%	SMD5D2	20.2%	18.4%
SMD3D3	25.6%	16.0%	SMD5D3	31.2%	22.5%
			SMD5D4	21.8%	20.5%
			SMD5D5	35.6%	32.0%

Sources: Authors' analysis of SCJS, HL1, PSE and GUS; Note that current SMD(3D) particular categories involving 2 or more domains cannot be clearly distinguished from the available sources.

The Ever SMD(5D) analysis is more robust, given that we are relying mainly on sample surveys and the samples are much larger for Ever SMD. It shows that the level of ill-health or long term conditions is rather less for those who experienced homelessness or offending in the past, but is even higher for those with mental health conditions, or combinations involving MH. In general the prevalence of these health indicators rises with number of SMD domains, but for SMD1 what is critical is which deprivation applies, with MH much the most significant, followed by homelessness. There are some signs that the incidence plateaus above SMD2.

For the subjective poor health indicator, as with some other aspects of quality of life, we checked to see if the degree of adverse score was greater or less than that associated with several other factors where their link with this is very well-established – disability, poverty, and age (although in reality the association of the latter with disadvantage has generally diminished dramatically over the last two decades). This was generally done using PSE and GUS data. This shows that disability has a bigger impact on poor health than SMD2-3, while SMD2 is about the same as the effect of being 'PSE Poor', but SMD3 is slightly worse. GUS results are consistent; disability is worse for health than SMD2-4, but relative low income poverty or poor neighbourhoods are less bad. (In all of these tests, age typically shows much lower levels of the problems considered).

We are able to go a little further into the number and type of long-term conditions reported by PSE adult respondents, as summarised by age band and SMD level in Table 20. This shows that, in general, for working age groups the number of health conditions rises with SMD level. Adults with SMD3 have substantially more long term conditions than those with no SMD disadvantages. However, it is only in the 45-54 age group that the progression is smooth up through the SMD levels. The effect seems weaker in the pre-retirement age range and disappears completely above that level.

Table 20: Average number of long term health conditions by age and SMD Level (Ever, 4D), working age adults in Scotland

Ever SMD Level	Age 25-34	Age 35-44	Age 45-54	Age 55-64
SMD0	1.61	1.28	1.79	1.91
SMD1	1.28	1.59	2.15	2.25
SMD2	1.83	1.11	2.50	3.53
SMD3	4.00	2.90	4.27	2.00
All	1.73	1.63	2.19	2.15

Source: authors' analysis of PSE data for Scotland
Note: excludes mental health conditions

This pattern applies across quite a wide range of the 11 specific conditions identified, but more clearly in the cases of mobility, stamina/breathing, social/behavioural, long term pain, and chronic illness.

7.2 Crime and Harm

To what extent are people with current or past experience of SMD also likely to be at heightened risk of themselves being victims of crime, or of harassment[21], and how far is this reflected in being worried about potential crime? It is widely recognised that fear of crime is not the same as actual victimhood, and may bear only a weak relationship to actual risks. This seems to be confirmed by the patterns in Table 21 below.

Table 21: Indicators of victimhood of harassment or crime, and worries about the threat of crime, by SMD categories

Current SMD3D Collapsed version	Harassed	Worried	Victim
No Disadv	8.4%	29.4%	12.4%
Homelessness only	21.1%	38.6%	20.5%
Offending only	8.4%	35.8%	14.9%
Substance only	20.9%	21.3%	27.9%
Any 2 or 3	36.7%	31.3%	42.7%
Total	9.0%	29.3%	13.0%
Count Version			
No disadv	8.4%	29.4%	12.4%
SMD3D1	18.7%	28.6%	23.3%
SMD3D2	34.1%	35.1%	39.0%
SMD3D3	50.0%	11.1%	64.7%
Total	9.0%	29.3%	13.0%
EVER SMD 5D CATEGORIES	Harassed	Worried	Victim
No Disadv	7.0%	20.4%	7.4%
Housing only	18.9%	27.4%	10.9%
Offending only	4.6%	24.3%	5.4%
Substance only	10.2%	19.9%	16.5%
MH Only	14.7%	36.6%	9.1%
DVA Only	21.0%	22.0%	12.6%
2 domain neither	15.8%	22.0%	38.2%
2 domain inc DVA	23.7%	32.3%	24.4%
2 domain inc MH/both	15.5%	22.1%	17.1%
SMD3+	11.5%	0.4%	6.7%
All adults	9.0%	29.3%	13.0%

[21] This could range from outright hate crime to various forms of anti-social behaviour

Count Version			
SMD5D0	6.7%	20.2%	7.2%
SMD5D1	15.4%	25.9%	10.6%
SMD5D2	23.0%	31.7%	23.2%
SMD5D3	28.0%	21.0%	26.5%
SMD5D4	24.4%	24.1%	23.6%
SMD5D5	38.4%	30.2%	32.9%

Authors analysis of SCJS and PSE; note PSE only available for 'Ever SMD' analysis.

Both harassment and crime victimhood show a strong positive relationship with SMD level, with rates for SMD2/3 adults being four times those of the group with no current disadvantages. This heightened risk also affects cases with one disadvantage, particularly those with homelessness or substance issues.

By contrast, those who express worries about the risk of crime are not significantly more likely to be found among those with SMD at the 1, 2, or 3 domain levels, although worries seem to be higher for those currently homeless than for those with substance-only issues. There is slightly more evidence of a relationship when using the Ever SMD 5D classification. This seems to be driven by people with MH issues, who may be at higher risk and may well experience more anxiety about a range of things including crime. Another element is DVA, which when combined with other SMD domains is associated with higher worries.

These findings are consistent with wider statistics and research on crime and perceptions of crime. The groups at greatest risk of being victims (e.g. young, working class males) are also groups with a higher probability of being poor, and/or being SMD, including in some cases involvement in crime as perpetrators. Groups who are more likely to express worries about crime tend to be groups (older, middle class) who actually have a low risk of being victims. The SCJS provides some support here, with the indicator of feeling unsafe at night (at home or walking in locality) not having a significant relationship with current SMD (3D), except homelessness, but showing more of a relationship with levels of Ever SMD (5D), which is mainly related to mental health

The PSE evidence on harassment shows that the association with SMD is rather stronger than that with disability or PSE poverty, while the rate for retirement age adults is well below average. The SMD2 group are more likely to be very worried about crime risks than the disabled, PSE poor or elderly groups.

Severity of Offending

An issue which weighs heavily in the quality of life of offenders, as well as those they come into contact with (family, police, prison and probation staff) is the severity and nature of their offending. More serious crimes lead to longer sentences; chronic repeat offending is more likely to result in custodial sentences; and recidivism is indicative of a more challenging situation for services, families and communities. Yet for prisoners themselves longer or repeat sentences may be a discouraging and depressing

experience. Table 22 looks at some indicators of severity of offending across the relevant SMD categories within the prison population.

Table 22: Indicators of severity of offending by SMD Categories for the prison population in Scotland, 2015-17

SMD 3D Cats	Over 1 year sentence	Not remand	In prison before	Involved knife crime	Gang member
Offender only	62.4%	70.8%	56.3%	40.6%	6.1%
Offender & h'less	81.2%	84.3%	59.8%	49.5%	6.5%
Offender & Subst	66.3%	72.4%	89.6%	72.5%	16.9%
Offend h'less & Subst	79.3%	82.3%	87.5%	79.5%	17.3%
Total	70.7%	76.3%	67.6%	53.7%	9.8%
SMD 5D Cats					
Offender only	69.0%	79.8%	43.9%	21.6%	3.4%
Offender & h'less	90.1%	88.4%	47.8%	32.6%	3.1%
Offender & Subst	70.6%	81.0%	84.0%	53.2%	16.9%
Offender & DVA	56.6%	49.1%	68.2%	49.2%	4.4%
Offender & MH	66.5%	73.5%	41.0%	27.9%	2.9%
Offender & 2 other	69.3%	76.1%	67.4%	59.4%	9.6%
Offender & 3 other	70.5%	74.3%	82.3%	73.3%	13.8%
All 5 domains	73.2%	79.1%	87.5%	80.9%	15.6%
Total	70.7%	76.3%	67.6%	53.7%	9.8%

Authors' analysis of SPS-Prisoner Surveys for 2015

A majority of most SMD-offender groups have been in prison before, although this falls below 50% for the first two groups in the second 5D classification. This proportion rises to nearly 90% for some of the SMD combinations, particularly offending+ substance and higher order combinations. Similarly, a majority of those present in prison are on sentences longer than one year, and most are serving sentences rather than being on remand (just one group, offending + DVA (victim)) has half of cases being on remand).

Knife crime has been a significant aggravating factor in recent years in Scotland. Involvement in this seems to rise quite strongly with SMD level among the prison population, while being mentioned by more than half overall. While involvement could take different forms (carrying a knife, being attacked or injured by a knife, as well as threatening or using one), this high general prevalence in the more serious end of the offender population is worrying. Gang membership might also be thought to be a related problematic issue, although the prevalence of this appears much less in the prison population. Nevertheless this also tends to rise with SMD level, and particularly where substance misuse is involved – unsurprisingly given the role of gangs in drug trafficking and dealing.

7.3 Housing Quality

We have already referred in the section on poverty and material deprivation to the higher incidence of housing deprivations/needs among the SMD groups. In this section we consider more qualitative aspects of housing which may contribute to and impair quality of life. Table 23 looks at two key measures here, not being warm enough in winter (often linked to fuel poverty) and the home being in a poor state of repair. In this case we focus on the Ever-SMD perspective, so we are typically looking at the housing conditions 'now' of people who have experienced SMD deprivations in the past, whether or not they are still experiencing them.

Table 23 shows that there is generally a strong positive relationship between SMD level and both of these problems. Adults in the SMD2-3 categories have rates of these two problems five to eight times higher than those who report no SMD issues. It is not just the homelessness/housing only cases which score highly, when looking at single domains or combinations. Offending and DVA both seem to be associated with high levels of these poor housing quality indicators, suggesting that both of these experiences tend to disrupt and limit housing opportunities and force people to accept poor conditions.

Table 23: Indicators of Inadequate Housing Quality by Ever SMD Categories

EVER SMD 5D CATEGORIES	Not Warm in Winter	Poor Repair
No Disadv	4.2%	7.7%
Housing only	8.9%	22.0%
Offending only	24.9%	18.5%
Substance only	0.0%	10.5%
MH Only	13.9%	24.4%
DVA Only	29.7%	39.7%
2 domain neither	8.9%	1.8%
2 domain inc DVA	31.8%	37.6%
2 domain inc MH/both	32.1%	52.9%
SMD3+	27.3%	46.5%
All adults)	4.6%	7.8%
Count Version		
SMD5D0	4.0%	7.3%
SMD5D1	12.6%	21.2%
SMD5D2	30.2%	37.7%
SMD5D3	32.8%	52.2%
SMD5D4	33.2%	52.4%
SMD5D5	6.2%	10.6%

Source: Based on authors analysis of PSE and GUS

Again, Table 23 suggests some plateauing of problems at the SMD2-3 level, but generally in these surveys the number of observations in the SMD4 or 5 categories is very small.

Within the GUS survey, which focuses on families with children, it can be seen that the ‘not warm’ indicator closely tracks ‘no central heating’. Although the scores for SMD3+ are a bit lower for these families than for all SMD3+, but there is still a significantly greater risk than for families with no SMD. For families, a garden is a valuable amenity, and we find a similar adverse pattern for families with SMD3 being three times more likely to have no garden.

Are SMD groups worse affected by these problems than disabled people or the poor generally? PSE evidence shows that the ‘not warm’ problem is worse for SMD groups, while the poor repair/house condition problem is at a similar level for SMD2 as for PSE poor households, while still being worse for SMD3+ cases. PSE also has an indicator of housing-related health problems, which is ten times higher for SMD3+ than for SMD0; again, while SMD2 is similar to PSE poverty in this respect, SMD3+ is worse. Levels are lower for disabled and very low for retirement age.

7.4 Social Exclusion

We are able to use one of our data sources on its own, the Poverty and Social Exclusion Survey of 2012, to present a picture across a range of types social exclusion of how well or badly people who have experienced different kinds and levels of SMD fare on these other dimensions of disadvantage. The PSE was a general household survey specifically designed to measure poverty and deprivation in detail but also to specifically provide measures across a dozen dimensions of social exclusion (Bramley & Bailey 2018). While some of these are less appropriately measured or relevant for this purpose, and some have already been reported in combination with other sources, it is worth bringing a number of these together as in Table 24 below. These include two classic aspects of social exclusion, having low levels of social network contacts or support, and having limited ability to participate in social activities. We also include an indicator of time deprivation/pressure, a summary indicator of dissatisfaction with area of residence, and reported experiences of discrimination.

Table 24: Indicators of Social Exclusion by Ever SMD (5D) categories

Ever SMD Cats	Low Social Support & Contacts	Limited Social Activities	Time Deprivation	Very Dissatis Area	Discrimin-ated Against
No disadvantages	9.9%	24.6%	10.0%	2.2%	4.6%
Homeless only	17.4%	40.4%	16.1%	2.3%	20.2%
Offending only	12.2%	34.2%	10.3%	0.0%	0.0%
DVA only	3.6%	47.6%	3.6%	0.0%	14.9%
Mental health only	39.7%	50.3%	33.0%	3.7%	14.6%
2 domains exc	0.0%	57.4%	0.0%	14.5%	25.4%
2 domains inc DVA	0.0%	83.6%	0.0%	0.0%	0.0%
2 domains inc M H	45.7%	77.0%	43.5%	14.8%	25.2%
3+ domains	32.2%	77.5%	35.9%	9.0%	48.8%
All adults	15.0%	32.7%	14.4%	3.1%	9.2%
.No disadv	9.9%	24.6%	10.0%	2.2%	4.6%
SMD5D1	**23.5%**	**43.2%**	**20.5%**	2.4%	**15.9%**
SMD5D2	**37.5%**	**74.4%**	**35.7%**	***14.2%***	**24.3%**
SMD5D33	**32.2%**	**77.5%**	**35.9%**	9.0%	**48.8%**

Source: authors' analysis of PSE-UK survey for Scotland, 2012.
Note; figures in **bold** in lower part of table are statistically significantly different from the 'None' value. Rows highlighted in yellow have small sample numbers.

For all five of these measures, there is reasonably clear evidence of greater social exclusion being associated with SMD. In the bottom part of the table, the differences between SMD1, 2 or 3+ are all large and statistically significant, except in the case of area dissatisfaction where this is clearly true for SMD2 and possibly the case for SMD3+. Taking SMD2 or 3 versus 'none, one could say that these instances of social exclusion are typically 3-4 times higher, with a rather more extreme difference in the case of being discriminated against. .

Looking at individual disadvantages, it appears that mental health is involved for the highest levels in most cases, particularly social support/networks, social activities, and time. Homelessness is quite associated with limited social activities and being discriminated against. DVA is also commonly associated with limited social activities.

7.5 Personal Well-being and Quality of Life

Low general life satisfaction (below 5 on a scale from 0 to 10) is more likely to be reported by adults with past or current experience of SMD (Table 25). It appears from the count version at the bottom that low wellbeing is generally much higher for those reporting one or more SMD disadvantages. However, this is arguably a bit misleading, as the differences are mainly driven by the mental health domain. There is a strong correlation between low life satisfaction and poor mental health as measured in PSE (based on GHQ scale as well as specific health conditions recorded). Table 22 shows that for single domains, although homelessness and offending show somewhat higher rates, it is only MH which shows a dramatically higher level of low life satisfaction.

Similarly, it is 2-domain combinations involving MH which show the very high levels of low life satisfaction.

Table 25: Low life satisfaction by SMD Categories

Ever SMD (4D) Category	Low Well-being
	4.3%
Homeless only	7.7%
Offending only	8.5%
DVA only	4.4%
Mental health only	36.5%
2 domains exc	7.0%
2 domains inc DVA	18.1%
2 domains inc Ment Hlth	41.2%
3+ domains	50.6%
Total	9.3%
Count version	
No disadv	4.3%
SMD4D1	18.7%
SMD4D2	32.9%
SMD4D3	51.7%
SMD4D4	34.2%

Source: UK PSE Survey 2012 for Scotland.

Quality of Institutional Life

For those who live in institutions, a non-trivial part of the SMD population, the functioning of the institution is a key determinant of quality of life. We can illustrate this, as well as the complicating role of SMD, by looking at data from the prisoners' survey on aspects of quality of life in Scottish prisons (Table 26). The first four indicators are 'positive' (higher percentages mean better quality of life) while the last two are 'negative', concerned with personal safety.

Table 26: Indicators of Quality of Life in Scottish prisons by SMD level of occupants

SMD 3D Cats	Regular in exercise	Rec-reation & Library	Canteen good	Facilities Clean	Bullied	Feared for Safety
Offender only	83.0%	75.8%	46.3%	95.1%	11.1%	14.1%
Offender & h'less	82.5%	77.3%	36.7%	93.9%	14.5%	16.6%
Offender & Subst	81.9%	78.5%	35.2%	90.3%	12.4%	22.2%
Offend h'less & Subst	80.2%	79.2%	32.9%	90.1%	17.4%	25.2%
Total	82.3%	77.2%	40.1%	93.2%	13.1%	17.8%
SMD 5D Cats						
Offender only	86.4%	77.9%	63.4%	94.6%	11.4%	9.5%
Offender & h'less	83.9%	76.3%	43.6%	93.7%	10.7%	11.3%
Offender & Subst	90.6%	80.4%	50.2%	92.6%	6.1%	8.3%
Offender & DVA	82.2%	76.1%	50.0%	98.3%	6.5%	10.2%
Offender & MH	80.3%	63.6%	32.7%	97.1%	14.4%	16.2%
Offender & 2 other	81.8%	79.3%	36.0%	93.2%	13.4%	20.2%
Offender & 3 other	79.3%	78.3%	30.8%	91.5%	13.5%	20.0%
All 5 domains	81.8%	77.7%	29.7%	91.2%	20.4%	28.9%
Total	82.3%	77.2%	40.1%	93.2%	13.1%	17.8%

Authors' analysis of SPS-Prisoner Surveys for 2013/15/17

The overall scores on three of the four positive indicators are relatively favourable, with large majorities reporting that they get regular exercise (>30 mins, > 2x per week), that they get to use recreation facilities and the library, and that their Halls/bathrooms/toilets are clean. There is only a slight falling off in these scores with higher levels of SMD. Only a minority are so positive about the canteen, and here there is a more pronounced falling off among the prisoners with higher levels of SMD. It may be that this group are more critical and demanding, or have a more negative outlook on life and expectations.

With the two negative indicators, while it is of concern if bullying does occur and is tolerated, and certainly if prisoners fear for their safety, it is reassuring that the proportions reporting these are only 13% and 18% overall. Such reports are somewhat more frequent from those with higher levels of SMD (who as we saw earlier are also more likely to be involved in more serious offending including knife crime).

It is probably necessary to make the caveat that only around 40% of prisoners have completed SPS-PS survey forms in the recent waves, so there may be a significant non-response bias in these numbers. It may be that prisoners with a more negative attitude, as well as those having had more negative experiences, may be more likely to decline to complete the survey. It has not been possible, with the time and data available, to perform any ‘re-weighting’ to try to correct for non-response bias in this source.

8. Outcomes

In this section we present evidence on 'outcomes' for SMD groups compared with wider groups, primarily in relation to particular types of service relating to particular domains of disadvantage (e.g. homelessness, substance misuse, offending). Broader outcomes relating to economic condition, health and quality of life have been largely covered in the sections on socio-economic profile and quality of life. Outcomes for children are considered in the children and families section.

8.1 Drug Treatment

We are able to look at some outcome indicators for people undergoing tier 3-4 drug treatment as recorded in the SDMD, although these are more limited than the range of indicators available in the comparable English NDTMS data reported in the 2015 *Hard Edges* report.

One summary indicator of drug use is the estimated daily spend on drugs. This is collected at the initial assessment and then again at the review stage as people complete their treatment or progress through the system. Table 23 shows the average spend figures for the same set of individuals, who recorded answers to this at both stages (i.e. cases with an SMR25b form completed), broken down by SMD groupings.

Table 27: Spending on Drugs by Adults in Treatment at initial assessment and later review stages (£ per day, percent change)

SMD Groupings	Daily Assessment	Spend Review	Change
SMD 3D Cats	£	£	percent
Subst only	18.85	4.98	-74%
Hless+Subst	20.38	5.86	-71%
Offend+Subst	18.00	4.85	-73%
All 3	23.44	7.84	-67%
Total	19.07	5.25	-72%
SMD 4D Cats			
Subst only	19.24	4.19	-78%
Hless+Subst	19.70	4.76	-76%
Offend+Subst	16.64	3.56	-79%
MH+Subst	18.63	6.42	-66%
Hless+MH+Subst	20.84	6.39	-69%
Hless+Offend+Subst	23.20	6.83	-71%
Offend+MH+Subst	20.54	7.27	-65%
All 4	24.66	8.89	-64%
Total	19.07	5.25	-72%
Count Version			
1.00	19.24	4.19	-78%
2.00	17.78	4.98	-72%
3.00	21.40	7.01	-67%
4.00	24.66	8.89	-64%
Total	19.07	5.25	-72%

Source: Author's analysis of SDMD 2008-15. Note that this only includes cases with spend data recorded at both assessment and review stages.

The table appears to show significant progress, where typically spend on drugs is reduced by nearly three-quarters. There is not apparently a great difference between the different SMD groups, but there is some tendency for those with more complex needs to show a lower proportionate reduction in spend – and these groups also tend to have a higher absolute spend.

One can look at these numbers from various perspectives, some more optimistic than others. The simplest interpretation is that this is a positive story: the drug treatment is achieving one of its main aims for those who stay the course, within the life cycle of treatment. It is slightly harder to achieve this for those with more complex needs, including homelessness, offending and/or mental health, but that would be expected. Substantial reduction in spending is good news because it reduces the consumption and harm, reduces the demand for illegal substances, and reduces the amount of drug-related crime, begging, destitution, prostitution and so forth.

A more qualified response would point out that this does not record the situation for the large number of cases who do not complete the course and for whom there is not a review stage record (SMR25b). A further observation is to suggest that the fact that

the review stage figures are not zero implies that not all the clients have achieved a completely drug-free status, and that they may be at significant risk of going back to a more problematic level of use later.

Outcomes are recorded at the review stage in terms of a range of administrative categories. Of these the most favourable is ‘received support’. The performance indicator derivable from this depends which categories are excluded from the denominator. In ‘Success1’ we exclude most of the other categories except ‘Discharged/disciplinary/unplanned’, on the grounds that these imply that the case is still in process or the outcome is not known. ‘Success2’ is more demanding, only giving the benefit of the doubt to cases which have ‘moved away/deceased/other’, but not excluding cases which are still in contact, waiting/admin, or referred/prison/transferred.

Table 24 shows the outcome categories and these two summary measures, for the SMD 3D categories and the wider SMD 4D counts. Overall only a minority of cases can be claimed as ‘successes’. On the more generous measure the overall success rate is 43%, with lower rates for homeless+substance cases (37%) and SMD3 (34%) cases on the original 3D classification. Results in terms of the 4D count are similarly poorer for 3 and 4 disadvantages (39% and 33%). On the tougher ‘Success2’ measure, these figures are generally lower, in the range 33% down to 19%.

Table 28: Outcomes Recorded for Drug Treatment Cases by SMD 3D Category and SMD 4D Count (percent of recorded outcomes within each SMD group)

Outcome Category					
SMD 3 Cats	Subst only	Hless +Subst	Offend +Subst	All 3	All Subst
In contact	22.2%	20.3%	16.0%	18.9%	19.6%
Received support	31.0%	26.3%	26.1%	19.3%	27.9%
Waiting, admin	1.7%	1.5%	1.1%	1.2%	1.4%
Referred, prison, transferred	1.9%	2.3%	17.1%	16.5%	8.6%
Discharged discip/unplanned	40.2%	45.1%	31.3%	38.2%	37.2%
Moved away, deceased, other	2.9%	4.4%	8.5%	5.8%	5.3%
Summary					
Success1	44%	37%	45%	34%	43%
Success2	32%	28%	28%	21%	29%

SMD 4D Count	1	2	3	4	All Subst
In contact	19.5%	19.6%	19.2%	22.5%	19.6%
Received support	31.6%	28.2%	23.2%	17.5%	27.9%
Waiting, admin	1.9%	1.3%	1.2%	1.2%	1.4%
Referred, prison, transferred	1.8%	9.8%	14.3%	14.9%	8.6%
Discharged discip/unplanned	42.4%	34.9%	35.9%	36.1%	37.2%
Moved away, deceased, other	2.8%	6.1%	6.2%	7.7%	5.3%
Summary					
Success1	43%	45%	39%	33%	43%
Success2	33%	30%	25%	19%	29%

It is possibly significant that homeless cases also receiving drug treatment seem to have poorer outcomes. It may be more difficult to maintain participation in the drug programme when challenged in terms of where you are living from day to day or week to week.

We further tested the hypothesis that there may have been an improvement in outcomes over time, by dividing the data into two time periods. There did not appear to have been a material change over the time period covered by this dataset. This situation was in some contrast to what we found in England, where outcomes had improved over time.

It is acknowledged that it is inherent in the nature of drug treatment programmes targeted at people with serious and longer term or recurrent addiction to opiates and other hard drugs that particular episodes of treatment will not always be ‘successful’

in securing complete compliance and a complete cessation of use of the relevant substances. In seeking some sort of benchmark we can refer to a recent report from Public Health England[22]. While it is difficult to exactly match particular measures, the English data suggest that 46-48% of illicit opiate users achieve abstinence after 3-6 months (international average 56%), with reductions of injecting in the range 52-61% over 3 months-1 year, reduction in convictions of 47% for those retained in or completing treatment. Potentially comparable is the indicator that 18-34% drop out of treatment at 3/6 months , with an international benchmark of 28%. The figures in Table 28 above suggest that in Scotland the dropout rate is higher, although admittedly this is not tied to specific time thresholds.

The other type of data on outcomes recorded in SDMD concern 'moving on referrals' to other support services in relation to employment, education, housing or social work. The main noteworthy finding is that the general level of any of these being recorded is low for the drug treatment population, standing at 5%. This is slightly higher for those with more complex need e.g. 8.5% for SMD3 (3D classification) or 12.6% for SMD4 (4D classification). Only 1.3% overall record a referral on to employment related services, while the proportions are similarly lower for the other categories. It is really just in housing referrals that there is a somewhat higher referring on rate for more complex need cases (involving homelessness).

It is not clear whether there is an issue here of under-recording, or whether this simply reflects a reality that drug treatment services do not see it as a major part of their job to make such referrals and/or that this client group do not actively seek them. Whether this should be regarded as a missed opportunity in the overall landscape of services is perhaps a matter for consideration, taken together with the findings from the qualitative case studies.

8.2 Homelessness Outcomes

The main outcome recorded for homeless cases in the HL1 administrative data is the form of rehousing achieved during the formal episode. This is analysed for the most recent 4-year period by tenure/housing type in Table 29a. In Scotland a majority (59%) of all homeless cases dealt with by local authorities obtain rehousing into social housing. The Table shows that, while this is even more the case for 'homeless only' cases (62%), the share drops off for some of the SMD groups, with only 50% of SMD2 (3D) and only 33% of SMD3 (3D) getting social housing, making 46% for all SMD2/3 groups. Homelessness with DVA and homeless with MH are groups which do rather better, with shares similar to homeless-only (62% and 58% respectively). The original SMD2/3 groups also seem significantly less likely to obtain a PR tenancy, whereas this is not the case for the DVA and MH homeless categories.

It is not clear why these patterns arise. It may be that these groups are seen as having less ability to sustain a tenancy, or have some record of ASB or rent arrears against their name. There may be a geographical element as well (e.g. private renting is used

[22] Burkinshaw, P., Knight, J., Anders, P., Eastwood, B., Muto, V., White, M., & Marsden, J. (2017) *An Evidence Review of the outcomes that can be expected of drug misuse treatment in England*. Public Health England www.gov.uk/phe; especially chapter 4.

more in areas like Edinburgh, where SMD is a smaller share of homeless). The corollary of having less chance of entering a social or private renting tenancy is a greater chance of ending up in a hostel, or 'other known' destination, or in the 'not known/lost contact' category.

We can also measure change in rehousing patterns between the period 2007-10 and the more recent period (2013-17) represented in Table 29a, with the changes shown as percentage points in Table 29b. We can summarise this by saying that social tenancies have increased as a destination for homeless in general, but least for those who are SMD3, have substance issues, or with MH problems. PRS shares are static, hostels are down slightly for some groups but not for some SMD groups. Other known destinations are up for SMD groups (it is not quite clear what these are, as they could include some 'other' types of supported accommodation, but maybe also B&B]. Returning to previous accommodation is down generally, but less so for SMD groups. Moving in with friends and relatives is down for homeless-only but static for SMD. Not known or lost contact is down generally (perhaps due to better recording), and particularly so for SMD cases.

Table 29a: Rehousing Outcomes by Homelessness-Related SMD Categories, Scotland, 2013-17 (percent)

Homeless- Related SMD Categories	LA Tenancy	RSL (HA) Tenancy	PR Tenancy	Hostel	Other Known	Return to Prev	Move in with F/R	NK/Lost contact	
Homeless only in original 3 D Classif	40.0%	21.8%	7.3%	0.5%	5.5%	4.5%	4.8%	15.6%	100.0%
Homeless & offending but not substance	34.1%	15.8%	4.1%	0.9%	14.0%	3.7%	5.2%	22.2%	100.0%
Homeless & substance but not offending	30.5%	19.7%	3.5%	5.3%	9.3%	3.7%	4.8%	23.2%	100.0%
Homeless, substance and offending	20.1%	13.3%	2.5%	5.7%	20.5%	2.2%	4.9%	30.8%	100.0%
Original SMD3D 2+ domains (inc homeless)	29.3%	17.1%	3.5%	4.0%	13.2%	3.4%	5.0%	24.6%	100.0%
Homeless & DVA	42.0%	20.1%	6.4%	0.5%	5.7%	7.7%	4.4%	13.1%	100.0%
Homeless & MH	36.9%	21.2%	5.8%	2.6%	8.0%	4.0%	4.6%	16.8%	100.0%
Homlessness & 3 other deprivations	25.4%	14.4%	2.6%	5.9%	16.9%	3.1%	4.4%	27.4%	100.0%

Table 29b: Change in Rehousing Outcomes by Homelessness-Related SMD Categories, 2007-10 to 2013-17 (% points)

Change in Share % point 2007-10 to 2013-17	LA Tenancy	RSL (HA) Tenancy	PR Tenancy	Hostel	Other Known	Return to Prev	Move in with F/R	NK/Lost contact
Homeless only in original 3 D Classif	9.0%	3.2%	0.4%	-0.8%	0.5%	-3.7%	-3.2%	-5.4%
Homeless & offending but not substance	8.6%	4.1%	-0.2%	-2.2%	3.2%	-2.4%	-2.1%	-9.0%
Homeless & substance but not offending	3.4%	2.2%	-0.6%	0.8%	1.8%	-1.0%	0.3%	-6.9%
Homeless, substance and offending	1.6%	1.6%	-0.2%	0.2%	7.5%	-1.7%	0.6%	-9.6%
Original SMD3D 2+ domains (inc homeless)	4.1%	2.0%	-0.4%	-0.3%	3.9%	-1.5%	-0.2%	-7.6%
Homeless & DVA	7.2%	0.9%	-0.1%	-0.5%	0.4%	-2.8%	-1.3%	-3.8%
Homeless & MH	3.5%	-0.4%	-0.5%	0.3%	1.5%	-1.5%	0.1%	-3.1%
Homlessness & 3 other deprivations	5.7%	0.3%	0.2%	-0.2%	4.7%	-2.6%	-0.3%	-7.8%

Overall these patterns, while showing quite a favourable picture for homeless households overall, show a less favourable set of outcomes for SMD cases. We speculate about some reasons for this, and possibly the case studies would shed more light.

The HHiS study (Waugh et al 2018) linked records for most homeless applicants in Scotland from 2002 to 2015 to mortality records. This analysis shows that people who experienced homelessness in Scotland between 2002- and 2015 had roughly five times higher chance of dying than people with the same age distribution living in the least deprived fifth of areas in Scotland. In the age range 25-45, this excess risk of mortality for homeless people was 10-20 times higher than that comparator group, and, 11,520 more people died in the homeless cohort than would have done if they were like people living in the least deprived fifth of neighbourhoods. Part of this difference could be put down to general poverty, given that a matched cohort of non-homeless people living in 20% most deprived areas would have had excess deaths of 5,830.

Another particular outcome associated with homelessness is the phenomenon of repeat homelessness. This may be regarded as an indicator of a service which has not been wholly successful, or of a problem which is chronic rather than, or as well as, acute. Although repeat homelessness within a year is recorded in the HL1 system, the HHiS study which looked at the whole cohort of homeless cases from 2002 to 2015 identifies a substantially larger group of people who have experienced repeat homelessness, amounting to 27.5% of the whole cohort. Table 30 shows the extent of repeat homelessness broken down across the 'Ever SMD' categories which can be readily identified from these published data (estimates are grossed up to represent the whole Scottish adult population).

Table 30: Homelessness and Repeat Homelessness by Selected Ever SMD Categories

Ever SMD Cats	All	Repeat HLess	% repeat
None	3,255,276	0	
Homeless only	222,186	47,111	21.2%
MH only	643,735	0	
Subst only	110,836	0	
H'less & MH	131,017	34,300	26.2%
H'less & Subst	82,650	38,375	46.4%
Total	4,445,701	119,786	
All homeless	435,853	119,786	27.5%

Source: author's calculations derived from Waugh et al (2018) *Health and Homelessness in Scotland* study, Table 10.3, and grossing factors derived from Scottish Household Survey.

This table shows that for adults who have only been homeless, without experiencing MH or substance issues (picked up by health records), 21% experienced more than one episode of homelessness. Those who experienced mental health problems as

well as homelessness had a 26% chance of repeat homelessness. This chance is hiked up to a significantly greater extent if the person experienced substance issues alongside homelessness (and in many cases MH as well), with nearly half of this group (46%, or 38,000 persons) experiencing repeat homelessness. To look at the figures the other way around, 60% of the (true) total of repeat homelessness is associated with SMD involving either mental health or substance misuse (or both).

Table 31 presents an analysis directly from the HHiS study, this time looking just at the ever homeless cohort[23], and taking a number of additional need factors and showing the extent to which mental health or substance issues were more associated with these factors. Some of these are clearly past background factors (armed forces or looked after), whereas the rough sleeping factor is contemporaneous with the/a homeless episode (within last three months).

Table 31: Additional Need Factors within the Ever Homeless Cohort by whether Mental Health or Substance issues were involved (percent within each need group)

Additional Need factors	***None***	***Mental Health Only***	***Drugs or Alcohol Involved***	***Total***
Not a member of the armed forces	51%	30%	19%	100%
Former member of armed forces	51%	30%	19%	100%
Not looked after	51%	30%	18%	100%
Formerly looked after	40%	25%	35%	100%
Not slept rough	53%	31%	17%	100%
Slept Rough	32%	24%	45%	100%
Not slept rough + Not looked after	53%	31%	16%	100%
Not slept rough + Looked after	43%	27%	30%	100%
Slept rough + Not looked after	32%	24%	44%	100%
Slept rough + looked after	23%	20%	58%	100%
All Homelessness Cohort	**51%**	**30%**	**19%**	**100%**

Source: Waugh et al (2018) *Health and Homelessness in Scotland* study, Table 10.6

This shows no difference between those who were in the armed forces and other homeless people. However, both previous looked-after status and whether slept rough seem to be associated with more substance use (in many cases along with MH), but less mental health problems (alone). A majority (58%) of formerly looked after adults who have also slept rough have drug/alcohol issues, and nearly half (45%) of those sleeping rough have these issues. So while both of these factors seem to increase the odds of substance use, rough sleeping seems to be a more powerful predictor. This

[23] This table is confined to the homeless cohort because the additional need factors are drawn from the HL1 data, and hence are not available for the wider control group populations.

may be because it is more closely associated in time, as well as the point that some people may choose or be forced to sleep rough because of their addictions.

8.3 Offending outcomes

One of the key outcomes in this domain would be reoffending rates. The national picture for reoffending rates is of a general decline in 'the average number of reconvictions per offender' from 0.61 in 1997/8 to 0.48 in 2015/16. To some extent this parallels general fall in crime rate over this period.

We can report various indicators from the Prisoners survey about the extent to which this group of more serious offenders show signs of 'moving on', addressing their offending issues, preparing for a more constructive life and receiving support from prison staff in this respect (Table 32). Around half have used the learning centre, with slightly higher use among those with homelessness issues, but rather lower for those with substance issues. Three quarters have done work in prison, and these rates are high across all SMD groups, and 60% say that this has helped them to address their issues – however, this latter proportion falls off with the higher SMD levels and particularly for offenders with mental health issues.

Table 32: Indicators of positive activities and experiences among the Scottish prisoner population by SMD categories

SMD 3D Cats	Learning Centre	Done Work in Prison	Helped address issues	Staff Support this	Staff Positive
Offender only	43.4%	71.2%	60.4%	47.3%	32.9%
Offender & h'less	56.5%	80.2%	68.4%	43.9%	23.2%
Offender & Subst	39.2%	83.0%	55.8%	33.5%	15.8%
Offend h'less & Subst	53.0%	92.1%	53.5%	33.1%	11.3%
Total	47.4%	78.7%	60.0%	41.0%	24.1%
SMD 5D Cats					
Offender only	52.4%	69.2%	65.8%	49.1%	44.9%
Offender & h'less	60.2%	78.1%	71.6%	60.0%	38.9%
Offender & Subst	50.7%	87.4%	68.7%	41.7%	28.5%
Offender & DVA	37.2%	72.7%	64.3%	49.2%	50.0%
Offender & MH	35.8%	69.3%	48.3%	41.2%	30.7%
Offender & 2 other	50.0%	75.6%	63.1%	41.5%	19.1%
Offender & 3 other	42.4%	84.3%	56.3%	37.8%	16.3%
All 5 domains	50.5%	91.4%	50.3%	30.7%	8.0%
Total	47.4%	78.7%	60.0%	41.0%	24.1%

Authors' analysis of SPS-Prisoner Survey for 2015

Two-fifths report staff to have helped to support this process and one quarter describe the staff's role in positive terms. Again these proportions fall off with higher SMD

levels, and particularly with combinations involving substance misuse. Again, one senses negative attitudes predominate towards staff and 'authority' generally among those with higher levels of SMD.

9. Risk Factors

9.1 The role of statistical models

In this section we address the question of risk factors for SMD in Scotland. The starting point is to consider the risk factors for the individual disadvantages, such as homelessness or offending. Moving on to combined multiple disadvantages may turn out to be reasonably represented by a combination of factors known or shown to influence the individual experiences, or it may turn out to change the emphasis somewhat or bring new factors into play.

This question provides a natural opportunity for the deployment of multivariate statistical models, for example regression or logistic regression models. It is particularly in the general household/population surveys that these can be deployed, to try to tease out which characteristics of individuals/households, and also of areas, seem to be more significant in predicting the risk of experiencing particular disadvantages, or combinations of disadvantages, compared with the wider general population who do not experience it, or only rarely. Clearly, Bramley & Fitzpatrick's (2018) 'Homelessness in the UK: who is most at risk?' provides something of a template for this kind of analysis. That article used three datasets; of these, the PSE survey is the particular source which is most useful in the present context[24] We therefore look at variants on the homelessness models to help predict other domains and combinations. In doing this we draw also on modelling work (on health and mental health) done as part of the JRF study of the Counting the Cost of Poverty in 2016[25]. Although PSE is primarily a cross-sectional survey, there are usable measures of certain key factors (especially poverty) from both the recent and the more distant past.

We also look at the SCJS, as another general household survey which identifies the main SMD domains and has good coverage of Scotland, trying similar models in that context. GUS is also amenable to this form of analysis, and here we can take advantage of its panel structure to predict experiences in one time period using attributes and experiences from earlier. It turns out that we can also run useful models within the administrative SDMD dataset, both to predict level of SMD and also outcome prospects.

[24] Of the other datsets used in that article, SHS does not have flags for most of the SMD domains, while BCS has only a limited sample in Scotland and is quite dated

[25] Bramley, Hirsch et al (2016) *Counting the Cost of UK Poverty.* York: Joseph Rowntree Foundation. www.jrf.org.uk

9.2 Poverty and Social Exclusion Survey

Table 33 presents a reasonable OLS regression model to predict the SMD (4D) count in the PSE dataset (for Scotland), in summary form. The overall fit of the model is quite good for a micro model (r-sq 0.28). Most of the variables included are significant at the 5% level (shown in bold) and nearly all have a direction of effect consistent with expectations. While this is basically a cross-sectional model, it does include a variable for 'living in poverty in the past' and the income poverty and employment variables are based on the linked FRS data for approx. one year before the PSE survey itself. This is important when considering potential causal interpretation of some of these relationships.

Table 33: Regression model to predict SMD (4D) count, PSE Scottish Sample

Variable	Std Coeff Beta	Signif
(Constant)		0.168
Aged under 25	**0.060**	0.050
Aged 55-64	-0.048	0.116
Single person household	**0.062**	0.044
Female	**-0.061**	0.044
Past poverty (scale)	**0.149**	0.000
Employment in Ben Unit (FRS)	-0.036	0.339
Low income AHC (FRS)	**0.127**	0.001
Social rent	**0.175**	0.000
Relative house price	-0.044	0.144
Signif loss of income	**0.186**	0.000
Major health problem	**0.157**	0.000
Low social support	**0.081**	0.009
Adj r-squared	0.280	
F ratio	27.200	
N of cases	810	

Note: standardized regression coefficients in bold are significant at 5% level

SMD is more associated with younger adults, single person households, males; and with both past and current poverty, living in social renting, significant recent loss of income, major health problems and a low level of social support/networks. These findings significantly echo those of Bramley and Fitzpatrick when looking just at homelessness, in the strong emphasis on current and past poverty.

9.3 Crime and Justice Survey

The second set of models to report (Table 34) are based on the Scottish Crime and Justice Survey (2 waves, 2012-14). This dataset offers a better balanced SMD definition, with good coverage of the substance domain included, and a larger sample, but less rich a set of variables covering poverty and different aspects of social

exclusion. Table 34 summarises two models, one for Current and the other for Ever SMD (5D).

Although the overall proportion of variance explained is rather less, particularly in the first (current) model, again most variables are significant and most have effects in the expected direction. The two models are generally quite similar, with only a handful of variables having different effects. In many cases these relationships are consistent with the bivariate descriptive tables presented earlier.

Table 34: Regression model to predict Current and Ever SMD (5D) counts, Scottish Crime and Justice Survey (standardised regression coefficients in OLS model)

Explanatory Variable	Current SMD number	Ever SMD5D number
Aged 16-24	**-0.037**	**-0.061**
Aged 45-59	**-0.103**	**-0.073**
Aged 60-74	**-0.164**	**-0.187**
Aged 75 plus	**-0.155**	**-0.197**
Female	**-0.147**	**-0.064**
Single person hshld	**0.091**	**0.101**
Married	**0.056**	**0.085**
Minority ethnic	**-0.032**	**-0.056**
Non UK Born	**-0.037**	**-0.042**
LT limiting illness/disab	0.019	**0.185**
No car	**0.044**	**0.073**
Working adult	**-0.135**	**-0.073**
Low income poverty	**0.062**	**0.068**
On benefits	0.027	0.016
Social lettings rate (LA)	**-0.027**	
40% poorest SIMD	0.023	**0.057**
Mental health instit pop (LA)	**-0.041**	-0.011
Crim justice institu pop (LA)	**-0.030**	
Area crime/ASB problems	**0.054**	
Financial difficulties/debt		**0.202**
Adj r-squared	0.104	0.222
F ratio	34.905	188
N of cases	5561	11145

Note: standardized regression coefficients in bold are significant at the 5% level

The age effects imply that it is 25-44 year olds who mainly experience SMD. The apparently positive effect of being married is not in line with expectations, but this may pick up some DVA effects (there is some parallel in the GUS findings). Minority ethnic and non-UK born have a lower risk, whereas LT health/disability, poverty and associated factors, and especially financial difficulties/debt, are associated with higher risk. More availability of social housing lettings is associated with lower current SMD. Against expectations, there is a negative relationship with institutional populations (mental hospitals and or prisons) in the locality.

9.4 Growing Up in Scotland

The third set of models reported are from GUS, which focuses on a cohort of parents (mainly female), and three models are shown in Table 35, for different SMD measures. While the SMD measures refer to the period around 2010 (around Wave 5), many of the explanatory variables are drawn from Wave 1 five years earlier. Again, this helps to resolve some issues about direction of causality, but also enables inclusion of earlier indications of SMD problems (e.g. drug or MH problems).

There are some differences in which variables are significant in each model, but generally the effects (where significant) are consistent across the models. A number of the significant effects are in line with the findings reported from PSE and SCJS and prior expectations: SMD is associated with financial difficulties, social renting, and other indicators of poverty (no car, lowest income, problems affording baby).

Table 35: Regression models to predict Current (5D) and Ever SMD (3D & 5D) counts in parental cohort, Growing Up in Scotland Survey 2005-2010.

Explanatory Variables	3 domain 'ever SMD' eversmd3no Beta	5 domain 'current SMD' currsmd5dno beta	5 domain 'ever SMD' eversmd5dno beta
(Constant)			
Age4 (banded)	-0.030		-0.032
Hhtd type (sing-cpl)	**-0.103**	**-0.144**	**-0.220**
Minority ethnic	**-0.035**		
Absent father problem		**0.081**	**0.047**
Financial difficulties	**0.042**	**0.108**	**0.100**
Social rent tenure	**0.124**	**0.063**	**0.127**
Private rent	**0.050**		
No car (w1)		**0.055**	0.039
Respondent never worked (w1)	**-0.041**		**-0.061**
High qualif (w1)	**-0.040**		
Number of consumer durable goods (w1)		-0.027	-0.015
Equiv income qtl (w1)			-0.037
lowest income qtl (w1)	**0.099**	**0.066**	**0.056**
Live with spouse (w1)	**0.077**	**0.041**	**0.066**
Unhappy at pregnancy		0.028	0.027
Probs affording baby*	**0.142**	**0.049**	**0.055**
Domestic probs baby	0.038	**0.039**	**0.048**
Transport probs baby	**-0.054**		
Health probs (w1)		**0.037**	**0.052**
Drugs prob (w1)	**0.229**	**0.148**	**0.131**
Mental health prob (w1)	0.024	**0.253**	**0.202**

Adjusted R squared	0.140	0.223	0.250
F ratio	37.7	75.4	65.7
N of cases	3615	2620	3294

Note: standardized regression coefficients in bold are significant at 5% level;

*Note: 'Thinking back to the first three months, how much of a problem was being able to afford all the baby clothes and equipment needed for [name]'? (1= A Big problem); and/or 'Is there anything else that you (and your partner) found particularly difficult at the present time in relation to bringing up [name]' – 'Money/finances'.

A couple of effects in this model are somewhat out of line with expectations. Couples (vs lone parent) families are less likely to suffer SMD, but this is apparently partly offset by a positive effect of living with spouse at Wave 1. This may pick up cases of poor relationships at that time, including some featuring DVA. This may also relate to the absent father problems. Respondent having never worked at Wave 1 (time of birth) is associated with *less* later SMD problems; this appears contrary to general expectations, but may be indirectly indicative that being a 'stay at home' parent in the early years may be protective. A number of problems experienced around or following the birth of the cohort child appear to have some association with later SMD.

9.5: Drug Treatment model

The final models here are slightly different, in that they take an administrative dataset rooted in one of the domains, in this case drug misuse. Everybody in this database scores at least SMD1 and has a serious drug misuse issue. The models shown in Table 36 are trying to predict the risks that someone *within this group* will also have other disadvantages from the 3D set or the 4D set (DVA is excluded). The model takes the same form (OLS regression, with standardised beta coefficients reported) but one other difference is that a set of small area characteristics are included alongside individual attributes. They do not add a lot to the overall explanation but they provide some further nuances.

More complexity (higher SMD) among drug users in treatment is associated with younger age, younger age of onset, males, NEETE (not in employment, education or training), long-term sickness or disability, those spending more on the drug habit, people who have been through treatment before, and those with alcohol issues as well. Living with a partner or parent appears to be somewhat protective against more complexity.

Some of the area relationships are not as expected (density, crowding, bad health), but as expected there are relationships with social and private renting, lack of car, and several types of institutional accommodation in the neighbourhood (prison, hostel, care home). Construction employment and higher qualifications appear to be somewhat protective.

Table 36: Regression models to predict Current (3D and 4D) SMD counts for individuals in drug treatment

Explanatory Variables	SMD3D Number Beta	SMD4D number Beta
(Constant)		
Year of assessment	**-.027**	**.023**
Grouped age	**-.122**	**-.060**
Age at onset of drug prob	**-.099**	**-.084**
Female	**-.150**	**-.059**
NEeTE - not in educ emp or trg	**.204**	**.178**
L t sick disabled	**.061**	**.129**
Spend on drugs	**.022**	**.020**
Previous contact/treatment	**.095**	**.065**
Live with partner	**-.107**	**-.106**
Live with parents	**-.107**	**-.096**
Alcohol issues	**.046**	**.089**
Area variables (Izone)		
Popn density	**-.014**	
Overcrowding	**-.032**	**-.026**
bad/ v bad health	**-.023**	**-.039**
social rented		**.037**
privately rented	**.064**	**.038**
Hhds with no car	.025	**.048**
Psych Hospital pop	.010	**-.048**
Nursing/care home pop	.010	**.013**
Prison pop	**.032**	**.013**
Hostel pop	**.045**	**.029**
Construction jobs	**-.025**	**-.025**
Qualifications - level 4	**-.074**	**-.039**
Adj R-squared	**.139**	**.086**
F ratio	**261.4**	**153.5**
N of cases	**35,528**	**35,528**

10. Services and Costs

10.1 A partial picture

In principle it would be desirable to interrogate the range of datasets available to enumerate and quantify the public (and other) services used by people with SMD in Scotland, including any indicators of adequacy or inadequacy of such services relative to the perceived needs or expectations of the potential service users. It would also be of value to use such information to compile estimates of the existing cost to public services in Scotland of the SMD population with the current problems that they face. Such evidence was one powerful element in arguing for more policy attention to the group based on the 2015 *Hard Edges* study in England.

Unfortunately, it is not possible to provide such a picture in a detailed and comprehensive fashion, on the basis of the data available to us. In the 2015 study, the most valuable data source was the MEH Survey, particularly for the estimation of costs (lifetime and current annual) and for the identification of service usage and adequacy/gaps. While this study still remains available to us, and can be seen to provide a starting point, it suffers from the limitations of being somewhat dated (2010 fieldwork) and being based on seven cities, of which only one was in Scotland. It would not be statistically robust produce lots of detailed tables for this one city, given the clustered sample design and overall size of sample.

It is also clear that most of the other data sources available to us do not provide a comprehensive or detailed enough account of the use of public services to build a comparable picture from new material on a comprehensive basis. Rather, we have some material in particular surveys which can help provide a partial picture, and some sectoral insights. The most important here is the HHiS study, which does enable us to identify the excess use and cost of a range of health services. Since (judging by Bramley et al 2016 study on *Counting the Cost of Poverty*) health is the sector where the heaviest costs are likely to lie, this is a significant step forward.

The PSE survey enables as to get a picture of the usage and (in) adequacy of a range of locally-delivered public services across SMD groups in 2012. The SCJS provides evidence on some services mainly in the justice field. Material to be discussed further in the next section, on children and families, can be drawn out to quantify use, and potentially comment on adequacy, of those services.

We discuss first the general service usage/adequacy pattern, then go on to look more specifically at the excess cost of health services.

10.2 Usage and adequacy of local services

The best source on this is probably the PSE, although this is somewhat dated: post-2012 austerity may be expected to have ‘worsened’ some services. Table 37 shows the patterns of usage (yes vs no) and constraints on usage (don’t use inadequate/don’t use can’t afford/ use but inadequate) for ten local public services of general interest (i.e. not demographically- or need-targeted). These numbers are for Scotland, where

the sample size is adequate but not very large (N=460); the patterns for UK are similar, and more robust statistically.

In terms of usage, there is not strong evidence of SMD groups using services markedly more, or markedly less, than people with no SMD, on an Ever basis. If there is a typical pattern, it seems to be that SMD1 and 2 groups use services marginally more, but SMD3 use them somewhat less. The only case where the usage seems to rise consistently across the range is Citizens Advice, confirming a picture of this service playing quite a strong role for people who are poor/disadvantaged and facing difficulties in relation to their welfare rights.

The lower part of Table 37 shows a stronger picture, both for Scotland and UK, which is that people with higher levels of SMD tend to get a worse (more inadequate) service, pretty much across the piece. This could be seen as (yet another) example of the 'Inverse Care Law'. While not all of these differences are statistically significant within Scotland, for UK as a whole, where samples are much bigger, the general picture holds, except possible for libraries and buses, services which were shown in Bramley & Besemer (2018) to be a bit more pro-poor than in earlier years. In some cases the geography may help the bulk of the SMD population, who tend to be in urban areas where buses and other local services have more of a presence.

While some of these services might be seen as quite discretionary, leisure-type activities, some are potentially very important for people who may be struggling with many issues, including libraries (for internet access and service signposting) and GPs (for healthcare access). If significantly higher proportions of SMD groups are reporting constraints on access to GPs, that does confirm accounts of problems accessing primary care (and of course the PSE sample is of those within private households, so missing out some of the groups most likely to be excluded).

The PSE also applies similar questions to parents/carers of children about seven services relevant to children, and to older or disabled people about services in the adults social care field. Because of this additional filtering the samples are pretty small for Scotland and one can place more credence on the UK-wide figures. The general story is of no very consistent variations in usage across SMD groups, but a systematically worse picture in terms of constraints on access or service adequacy, particularly for children's services.

Table 37: Usage and Constraints for local public services of general interest by Ever SMD Score, Scotland 2012

Usage by	Libraries	Sports Facil	Museums etc	Evening Classes	Village/ Comm Hall	Doctor	Dentist	Citizens Advice	Bus	Train
smdscore6	UseLibU	UseSptU	UseMusmU	UseEvClU	UseVilgU	UseDocU	UseDentU	UseCitU	UseBusU	UseTrnU
.00	0.46	0.43	0.34	0.12	0.36	0.98	0.79	0.16	0.66	0.53
1.00	0.47	0.52	0.31	0.15	0.32	0.97	0.84	0.31	0.66	0.53
2.00	0.47	0.55	0.35	0.14	0.31	0.95	0.86	0.31	0.64	0.46
3.00	0.38	0.31	0.22	0.08	0.15	0.99	0.80	0.36	0.67	0.44
Total	0.46	0.46	0.33	0.13	0.34	0.97	0.80	0.21	0.65	0.53
Constraints										
.00	0.09	0.14	0.29	0.12	0.12	0.07	0.13	0.17	0.16	0.26
1.00	0.13	0.21	0.33	0.17	0.17	0.11	0.14	0.18	0.17	0.21
2.00	0.19	0.22	0.41	0.30	0.16	0.14	0.12	0.40	0.20	0.34
3.00	0.15	0.14	0.37	0.08	0.16	0.13	0.21	0.49	0.16	0.26
Total	0.10	0.16	0.31	0.14	0.14	0.08	0.13	0.19	0.16	0.25

Source: Authors' analysis of PSE survey.

10.3 Police and Justice Services

Table 38 shows the extent to which people have sought advice or help with problems or disputes in the broad field of civil law from different agencies, broken down by SMD categories/levels. Citizens Advice Services and doctors/health professionals come out positively in the sense of showing a systematic positive relationship between most categories of SMD, and the general count of SMD issues, and use of that source of help (offending-only being the exception). The picture for local councils/other public authorities is more mixed, with substantial use in the case of housing and offending (the latter perhaps reflecting the statutory role of social work services in the supervision of offenders), but low use in the cases of substance-only or higher levels of SMD.

Table 38: Proportion of adults who have sought advice or help with a justice-related 'problem'[26] from different public services by SMD category, Scotland 2012-14

SMD Category	Citizens Advice	Local Council/ pub auth	Doctor/ health prof	Police
Current 3D cat				
No Disadv	18.9%	30.3%	14.2%	27.2%
Housing only	28.8%	35.2%	17.0%	3.7%
Offending only	13.6%	45.0%	5.3%	10.0%
Substance only	23.5%	9.7%	35.5%	12.9%
Any 2 or 3 deprivs	30.3%	0.0%	77.8%	0.0%
All adults	19.7%	29.9%	15.5%	24.8%
Ever 5D Count				
0	14.7%	32.1%	8.9%	28.4%
1	21.4%	27.5%	17.6%	26.9%
2	25.9%	31.9%	19.5%	15.0%
3	35.9%	23.1%	40.4%	9.6%
4	33.3%	20.0%	36.4%	9.1%
5	33.3%	25.0%	50.0%	0.0%
All adults	19.7%	29.8%	15.4%	24.8%

Source: Authors' analysis of SCJS.

For police, there is generally an inverse relationship between SMD level and seeking advice/help. This is perhaps unsurprising in relation to the domains of offending and substance misuse (much of which is illegal).

Table 39 focuses on the police specifically. It shows, in the first column, that adults with SMD are systematically more likely to come into contact with the police. Their satisfaction level with that contact/service is likely to be systematically lower. This

[26] Problems or disputes concerning family, home, living arrangements, health or wellbeing, money or finances, or unfair treatment in last 3 years

reflects the fact that they are quite likely to be involved as perpetrators of crime in an inherently conflictual situation. In addition they may be more likely to live in a poor/deprived neighbourhood where relationships with police may be more often tense or conflictual. This is partially borne out by the indicators 'people have confidence' in the police and 'the police are doing a good job overall', which both gain lower scores of agreement among people with SMD in general and particularly higher levels of SMD.

Table 39: Indicators of Involvement with and evaluation of police service by SMD Categories, Scotland 2012-14.

SMD Category	Personal Contact	Satisfied with Response	Police patrol locality	People have confidence	Good Job overall
Current 3D cat					
No Disadv	30.0%	68.7%	39.0%	48.1%	60.5%
Housing only	46.3%	57.5%	35.8%	36.2%	50.9%
Offending only	38.1%	32.3%	38.1%	27.5%	39.2%
Substance only	53.2%	43.1%	31.8%	34.1%	44.8%
Any 2 or 3 deprivs	69.2%	39.3%	28.8%	20.3%	29.7%
All adults	31.0%	66.2%	38.8%	47.3%	59.7%
Ever 5D Count					
0	27.6%	72.1%	38.9%	50.9%	61.9%
1	35.7%	61.5%	39.8%	40.8%	55.0%
2	51.1%	48.7%	37.5%	32.4%	44.1%
3	59.3%	46.7%	34.4%	28.1%	41.1%
4	70.7%	46.7%	53.7%	32.5%	36.6%
5	54.5%	0.0%	27.3%	9.1%	30.0%
All adults	31.2%	65.5%	39.0%	47.3%	59.0%

Source: Authors' analysis of SCJS.

10.4 Health Service Utilisation

The most telling evidence currently available in Scotland on the relationship between SMD, particularly that involving homelessness, and health service utilisation (and hence cost) is from the 'Homeless to health' (HHiS) data linkage research. Probably the most eye-watering indicators derived from that research are where utilisation rates (per 1000 population) for particular types of treatment are compared between the homeless cohort and the general population, and in particular the population living in the least deprived fifth of neighbourhoods in Scotland. The general pattern is one where utilisation is significantly higher for people in the poorest neighbourhoods (the general poverty gradient), but then dramatically higher again for homeless people, sometimes referred to as the 'cliff edge' of ill-health associated with severe social exclusion.

Table 40 below shows the ratios between the 'Ever homeless' group and the overall population average, and between the Ever homeless and the least deprived neighbourhoods, treated as a baseline. This is done for the seven specific types of health service utilisation which were analysed in this study (some of these are more specific than others). Because there is generally also a strong relationship with age, it is important to look at different age bands. Although there are also some gender differences, these are less dramatic than the age effects.

Table 40: Ratio of selected health service utilisations by ever homeless cohort relative to overall population and population in least deprived fifth of neighbourhoods, by age group (relative utilisation rates per 1000 in each age group)

Age Group	Drug Treatment	Substance Prescribing	Acute IP Mental Hlth	Accident & Emergency	Mental Hlth Presc	Acute IP&DC Admissions	Out-Patient Appt
Ratio of Homeless to All							
Age16-25	5.0	5.3	3.3	2.1	2.6	1.8	1.7
Age26-35	4.4	4.3	3.6	2.3	3.0	2.2	1.9
Age36-45	5.7	5.0	4.6	2.7	3.0	2.4	1.9
Age46-55	7.8	6.3	5.3	2.7	2.8	2.3	1.8
Age56-65	12.8	7.2	6.9	2.6	2.5	2.1	1.6
Age66&Over	10.0	6.2	2.9	2.0	1.8	1.6	1.2
Total adult	7.8	6.5	4.2	2.5	2.1	1.4	1.5
Ratio of Homeless to Least Deprived							
Age16-25	68.4	473.5	7.2	3.5	5.0	2.7	2.2
Age26-35	139.7	173.1	24.4	5.7	12.4	4.7	3.4
Age36-45	156.4	138.0	30.1	5.8	9.1	4.4	2.6
Age46-55	118.9	92.1	22.8	4.7	6.5	3.6	2.3
Age56-65	0.0	34.1	20.9	3.8	4.9	2.9	1.9
Age66&Over	0.0	7.2	5.1	2.5	2.5	2.0	1.3
Total adult	208.8	109.8	13.2	4.1	4.1	1.9	1.7

Source: Authors' analysis of data from Waugh et al (2018) HHIS data linkage research report.

The treatments which are most strongly associated with homelessness, in terms of these ratios, are those shown in the first two columns, drug treatment and substance prescribing. In the middle age ranges these show ratios of 4 to 8 times the overall average and 100-200 times the least deprived baseline. These conditions and associated treatments have an extraordinarily strong relationship with homelessness, as well a strong relationship with poverty. That is not the same as saying that most homeless people are substance users; it is saying that substance use is incredibly rare in the least deprived areas and quite common among the homeless.

The next strongest relationship is with acute in-patient mental health treatment. This strong association is well-recognised in the field. Not many people get to be mental in-patients, but quite a lot of them have been homeless. For this group, the ratios to

average prevalence are similar to those for substance treatment, but the ratios to the least deprived areas are much lower – this level of severe mental health condition does occur across the social range, but still very often comes to be associated with homelessness.

The next type of health utilisation considered is Accident and Emergency; although it is well known and oft-quoted that this has a strong relationship with homelessness and SMD, the ratios are lower than those just considered (2-3 times average, 4-6 times least deprived). Mental health prescriptions come next; these are similar overall to A&E, but with some higher ratios in the younger age groups and relative to least deprived areas.

The next utilisation category is by far the most important, in terms of overall scale and cost, as this captures the main acute sector health activity. Here we can say that homeless people in the key younger-middle age range have nearly two-and-a-half times the rate of acute admissions of the average for their age, and four to five times the rates for people from the least deprived areas. The final category considered is out-patient appointments, which looks similar in terms of the overall average ratios but with less high ratios in the middle age ranges.

Excess costs of healthcare

It is possible to derive from the utilisation data estimates of the associated health service costs. We are particularly interested in the extra costs deriving from the higher levels of utilisation described above, for people who have experienced homelessness and other deprivations. Taking average unit costs from various sources[27] and applying them to the number of episodes of each type for each age/sex group in the three cohorts (homeless, least deprived, most deprived), and 'grossing up'[28] we get an estimate of the total costs and cost per head. If we subtract the cost per head for the least deprived group we get an excess cost for general deprivation or poverty and an excess cost for having ever been homeless. The results of this procedure are shown in Table 35. For each type of treatment, the cost per head is shown in the first line and the amount of excess cost in *£million* is shown in *italic* in the second line.

The largest elements of excess cost associated with the homeless cohort are in mental health prescriptions (£311m) and acute in-patient and day cases (£306m), followed by substance prescriptions at £150m. The smallest items are actually drug treatment and out-patient appointments. The total excess cost of health for people who have ever been homeless is £900m, which seems a big figure, compared with the Scottish Health budget of c. £13bn, although it should be recalled that Ever Homeless in Scotland are about 10% of the whole adult population. The next column of the table shows the

[27] Curtis, L. & Burns, A. (2016) *Unit Costs of Health and Social Care 2016*. PSSRU. University of Kent .http://www.pssru.ac.uk ; Information Services Division (ISD), *Scottish Health Service Costs: Year ended 31 March 2017.* NHS National Services Scotland; New Economy (2015) *Unit Cost Database (v.1.4)* http://neweconomymanchester.com/stories/1966

[28] As reported in the HHIS working paper, grossing up factors were derived for the cohorts based on analysis of the Scottish Household Survey data, to quantify the average deprivation profile across all quintiles of the population.

excess costs for poverty and deprivation affecting people in the general population who have not been homeless, and this figure amounts to £2.3bn. The total (2.3+0.9=£3.2bn) is roughly in line with Bramley et al 2016 estimates of the excess health costs in Scotland associated with poverty broadly defined (i.e. about a quarter of the health budget)

Table 41: Estimated Excess Costs of Deprivation and Homelessness by Selected Health Service Activities, Scotland 2015.

Activity	Type of Cost	Ever H'less	Most Depr	Least Depr	Average
Drug treatment	Cost per head	£66.50	£4.87	£0.32	£8.58
	Excess cost £m	*30.3*	*7.5*		
Substance precriptn	Cost per head	£329.97	£43.93	£3.00	£50.47
	Excess cost £m	*149.7*	*67.8*		
Acute IP MH	Cost per head	£121.79	£33.67	£9.24	£29.32
	Excess cost £m	*51.5*	*11.2*		
A&E	Cost per head	£169.55	£82.61	£41.08	£68.93
	Excess cost £m	*58.8*	*68.8*		
MH prescriptn	Cost per head	£843.02	£468.53	£163.69	£341.80
	Excess cost £m	*311.1*	*505.3*		
Acute IP&DC admissions	Cost per head	£670.78	£980.27	£622.20	£769.64
	Excess cost £m	*305.8*	*1,620.0*		
Out-Patient appts	Cost per head	£136.15	£110.21	£83.20	£98.39
	Excess cost £m	*24.2*	*44.8*		
Total	*Excess cost £m*	*901.2*	*2,317.9*		

These estimates remain crude and incomplete; for example they use a simple average unit cost for each category of episode. It should also be borne in mind that what are shown here as excess costs of homelessness may not be directly, solely or even mainly attributable to homelessness; there are other characteristics and experiences associated with homelessness at the individual level, which may have a strong effect on ill-health. These include poverty, a major background and causal factor in homelessness, mental ill-health (see comments below on co-morbidity), substance misuse, and so forth.

We have made some further attempt to analyse the HHiS data in order to try to link excess costs to the different combinations of SMD domains which are identifiable in this dataset. In particular, for one important type of healthcare utilisation episode (inpatient admissions) we have additional data on the contributory factors recorded, which enables us to classify cases according to the presence of substance issues or mental health issues, or combinations of these with homelessness. This draws attention to 'SMD' identified at the time of admission, and seen as relevant to the health condition nor treatment, which is a more specific link than just saying that this person

has used substances or had mental health issues in the past. This analysis also takes account of differential length of hospitalisation by taking the actual bed-days.

Table 42 presents this analysis. It can be seen that each of the SMD categories incurs higher expenditure, ranging from only 14% for the (ever) homeless only group to 64% for the (current) MH only group and 60% for the substance only group. The mark-ups for homeless and MH or homeless and substance combinations seem to lie between these levels at around 40% . This analysis appears to suggest a total additional spend on this part of the health service of £383m, or 16.6% of the total in this analysis. Much the largest chunk of additional spending seems to be associated with mental health only. This underlines the point that there is a large burden of co-morbidity of physical health problems among those experiencing mental health problems.

Table 42: Expenditure and excess expenditure on In-patient and Day Cases by SMD categories (annual)

Expenditure Item	No SMD	H'less Only	MH Only	Subst Only	H'less + MH	H'Less + Subst (&MH)
Act exp/adult	419.61	480.29	688.62	673.13	590.75	587.41
Excess exp/adult	-	60.67	269.01	253.51	171.13	167.79
Excess exp £m	*0*	*11.0*	*287.0*	*38.3*	*29.0*	*18.0*
Homeless excess		11.0			29.0	18.0
percent excess		14%	64%	60%	41%	40%

11. Children and Families

11.1 Households with children

One of the findings of the original *Hard Edges* study for England was that a surprisingly high proportion of SMD cases involved the subjects having potential contact with children, whether through living with their own family and children, living with a partner's children, or having contact with own non-resident children. Admittedly, this evidence was derived from one dataset (NDTMS) and not fully matched in the other datasets used in that study.

In Scotland, it looks as though the level of child connections of the SMD population may be less than what was found in England, although of course there are many differences in the data sources. Firstly, the broad household type analysis reported in Table 7 showed that being in a family-with-children household type applied to around a quarter of those reporting one domain of SMD (3D) or up to two domains (ever 5D classification). Of course, one would still need to add cases where the subject had contact with own children who were not co-resident to get a strictly comparable figure.

Table 43 breaks the family households down between couple families and lone parents. In terms of single current domains (3D), families are slightly more common for homeless cases. Rising complexity measured by SMD count goes with falling proportion of families. Lone parents seem to slightly outnumber couple families in the homelessness only and the combinations of homelessness with offending or substance, but are rare in the SMD3 group.

Table 43: Family household types of SMD Groupings based on composite of sources

Curr SMD 3D	L P Fam	Cpl Fam	Family
No disadv	8.3%	15.0%	23.3%
H'less only	11.9%	11.4%	23.3%
Offend only	9.1%	12.0%	21.0%
Subst only	9.9%	9.7%	19.7%
H'less +Off	6.3%	4.0%	10.3%
H'less +Subst	5.1%	3.5%	8.6%
Off +Subst	4.3%	5.0%	9.3%
SMD3(+)	1.0%	4.9%	5.9%
1 disadv	13.5%	8.3%	21.8%
2 disadv	5.6%	3.6%	9.3%
3 disadv	0.9%	4.7%	5.6%
All adults	7.3%	19.6%	26.9%
Ever SMD 5D	L P Fam	Cpl Fam	Family
No Disadv	8.5%	18.1%	26.6%
H'less only	14.5%	15.4%	29.9%
Offend only	13.9%	20.2%	34.2%
Subst only	13.7%	10.0%	23.7%
MH Only	6.1%	9.7%	15.8%
DVA Only	17.7%	20.7%	38.3%
2 of Hl/Off/Sub	9.2%	15.9%	25.1%
DVA +1 Oth	33.0%	15.8%	48.8%
MH +1 Oth	12.3%	9.1%	21.4%
SMD3(+)	6.1%	11.4%	17.5%
All adults	9.7%	17.8%	27.5%
o disadv	8.5%	18.1%	26.5%
1 disadv	13.0%	11.9%	24.9%
2 disadv	13.6%	10.8%	24.3%
3 disadv	5.3%	8.4%	13.7%
4 disadv	2.9%	5.3%	8.1%
5 disadv	2.7%	4.9%	7.5%

Sources: authors analyses of HL1, PSE, Destitution, GUS

From the Ever SMD 5D analysis, the proportion of family households was greatest in the DVA+1 other, DVA only and offending only categories. The proportion of families was lowest in cases with three or more disadvantages. It appears that couple families are more common in most single-domain cases except substance only; for 2-domain cases involving the original triumvirate, couple families are a majority, whereas for cases involving DVA (especially) or MH, lone parents outnumber couple families. One

would expect lone parenthood, rather than couple-family status, to be more associated with many of these types of SMD, but particularly where DVA is involved. However, some women remain trapped in abusive relationships, while in other cases they may move on to a different partner later.

Clearly, also, another implication of these household demographics is that the risk of poverty, possibly severe poverty, is heightened, insofar as lone parent households have a very high incidence of poverty and severe poverty (Dermott & Main 2018, Fitzpatrick et al 2018).

11.2 Child Contact

One of the more striking findings of the 2015 *Hard Edges* report for England was that a high proportion adults with SMD appeared to have child contacts of one sort or another. This finding was particularly associated with the analysis of the NDTMS datasets for drug and alcohol treatment, so it is perhaps useful to start by looking at the nearest equivalent dataset for Scotland, namely SDMD. Table 44 presents the breakdown across three sub-categories – live with own children, live with partner's children, in contact with own dependent children - as well as the proportion with no children. The table appears to suggest that it is a minority of all adults in treatment who have any form of child contact, around 38% overall. This proportion does not vary much across the SMD categories and levels.

While this appears on the face of it to be a substantive difference from the previous English findings, some care is needed in interpreting it. The main English findings referred to those in treatment for both drugs and alcohol, not just drugs, and it might have been that the child contact proportions were higher for alcohol than for drug treatment cases – however, this was not the case. The main differences, referring back to the English NDTMS data, were that in the English study the category 'live with own children' had a bigger share (20% vs 13%), the middle category (which was differently described as 'other child contact – living with children') had a substantial share of 14% whereas in Table 38 it is only shown as around 1%; the third category, having contact with own non-resident children, applies to a similar proportion in both datasets (20-24%).

Table 44: Child Contacts for Adults receiving Drug Treatment in Scotland by SMD categories, 2008-15

SMD 3D Categories	No children	Live with own children	Live with partners children	Contact with own children
Subst only	62.3%	18.4%	.8%	18.4%
Hless+Subst	60.8%	8.7%	.9%	29.5%
Offend+Subst	63.2%	8.8%	1.0%	27.0%
All 3	60.6%	3.9%	1.0%	34.5%
All subst treatment	62.4%	13.3%	.9%	23.5%
SMD 4D Categories				
Subst only	62.6%	18.7%	.8%	17.9%
Hless+Subst	58.8%	9.8%	.9%	30.5%
Offend+Subst	63.6%	9.1%	1.1%	26.2%
MH+Subst	61.5%	17.7%	.8%	20.0%
Hless+MH+Subst	64.1%	6.6%	.8%	28.5%
Hless+Offend+Subst	59.4%	4.3%	1.0%	35.3%
Offend+MH+Subst	62.8%	7.5%	1.0%	28.7%
All 4	63.6%	3.0%	.9%	32.5%
All subst treatment	62.4%	13.3%	.9%	23.5%
SMD 4D Count				
1.00	62.6%	18.7%	.8%	17.9%
2.00	62.3%	12.7%	1.0%	24.1%
3.00	61.9%	6.3%	1.0%	30.8%
4.00	63.6%	3.0%	.9%	32.5%

Source: Authors' analysis of SDMD data
Note: SDMD does not have information on DVA, hence 4D classification.

The answer to the mystery may be that the English NDTMS form, by using a different form, solicits a different piece of information in the middle category. It may pick up the common cases of adults who are living with their parental family, or with other relatives or friends, who have their own children, not the dependent children of the adult receiving drug treatment. While this may be the answer, it suggests that therefore the Scottish data understate the extent of child contact, by not including this group. It also appears that the proportion living with partner's children looks very low at around 1%, and one wonders whether this is under-reported (perhaps because of cohabitation rules associated with benefits).

The other aspect of Table 44 worthy of comment is that, although the overall proportion of cases with 'no children' does not vary much with SMD categories, this is not true of the specific categories where there is child contact. SMD adults (in drug treatment) are less likely to live with their own children, but more likely to have contact with them on a non-residential basis. This is most likely in the case of the original 3-domain SMD combination of homelessness, offending and substance.

Table 45 looks at a similar analysis for the Scottish prison population. Obviously, since this is an institutional population none will be co-resident with their children, and the issue is one of contact. Unlike the drug treatment group, a majority of prisoners (63%) appear to have children, and this does not vary greatly across the SMD groups (a bit less for offender-substance and offender-MH combinations). However, consistent with the above and rather as one would expect, the proportion who are involved in the care of children is generally less (47% overall), and this falls where additional domains of SMD are involved, particularly homelessness. There is a further drop-off (to only one-third overall, or half of the cases where there are children) when we look at whether children visit, and again this is lower still for some of the SMD groups (offending and homeless, or multiple domains).

Table 45 also records whether prisoners have received help with their family issues. 21% say that they have, which looks rather below the proportion of cases where there probably are family issues (e.g. the 30% non-visiting). This proportion is lower in cases of high level combinations of SMD, and also particularly combinations of offending and substance or offending and DVA.

Table 45: Child contact for the Scottish prison population, c.2017

SMD 3D Cats	Has Child (ren)	Involved in Care of Children	Children Visit	Help w family issues
Offender only	60.5%	53.1%	37.3%	24.3%
Offender & h'less	58.7%	34.9%	23.5%	22.0%
Offender & Subst	69.8%	52.2%	32.5%	14.0%
Offend h'less & Subst	70.1%	40.9%	28.9%	19.6%
Total	63.1%	46.5%	31.7%	21.1%
SMD 5D Cats				
Offender only	59.2%	61.7%	46.6%	28.5%
Offender & h'less	60.6%	34.1%	37.1%	31.1%
Offender & Subst	56.7%	56.3%	36.3%	20.4%
Offender & DVA	67.6%	46.4%	32.5%	14.1%
Offender & MH	56.5%	50.5%	41.1%	22.0%
Offender & 2 other	62.7%	44.6%	27.0%	23.1%
Offender & 3 other	68.2%	42.4%	27.2%	15.9%
All 5 domains	64.7%	38.4%	23.8%	17.2%
Total	63.1%	46.5%	31.7%	21.1%

Source: authors' analysis of SPS-PS

The underlying reason why we are so interested in child contact is the growing concern and evidence that there are significant connections between adult SMD and 'Adverse Childhood Experiences' (ACES). Hence it is appropriate to discuss these experiences, and their relationships to SMD, further at this point.

11.3 Adverse Childhood Experiences

There is considerable overlap between the definitions of SMD used in this study and many of the factors that would count as ACE-scoring experiences or situations. In other words, these very often involve a significant adult in a child's life having the types of problems and experiences that we classify as 'SMD'. There is therefore a considerable fear that today's SMD adults may contribute to ACEs experienced by today's children, potentially storing up problems, including health and wellbeing impacts, in later life. Secondly, when viewed retrospectively over the lifecourse of adults who are today experiencing the most serious forms of SMD, it is clear that most of these adults had a very difficult childhood, with much family disruption, stress, and conflict as well as often serious poverty and material deprivation. There is striking evidence of this in the MEH survey, as cited in *Hard Edges*, as well as in the qualitative elements of this study Further, when we try to model the risks of experiencing SMD in adulthood, as for example in some of the models reported in the section of this report on 'Risks', then models tend to become more effective and revealing when they are able to take account of past experiences of poverty, deprivation and (if possible) ACEs.

Combinations of ACEs quite often, although not invariably, lead to a child coming to the attention of Social Work services, and this may lead to a period when the child is supervised, put on a risk register, and/or 'looked after' by the local authority (more commonly known as being taken into care). Therefore, having ever been in care is a reasonable indicator of having had a troubled childhood with significant ACEs. It is thus interesting to look at the record of SMD groups in terms of their history and whether they were ever in care (LAC in Scotland). Table 46 shows that 30% of prisoners in Scotland were ever in care, and that this proportion rises from 23% of offenders only (current 3D), or only 14% of offender-only in the 5D classification rising to 38% of 'all 3 in the former classification and 42% of Offender+ 3 other domains in the 5D. We estimate that a baseline chance of having ever been in care for the adult population in Scotland is about 2.6%, so we are talking about multiples of 10-15 times the baseline risk of SMD for people who were in care.

Table 46: Need/Risk Aggravating Factors from Childhood and Earlier Life in case of Prisoners, by SMD categories

SMD 3D Cats	Ever in Care	Care 3 +placements	L D or mental disorder	Reading, number diffic	Possible Traffick-ing	Ever Armed Forces
Offender only	22.9%	13.1%	34.1%	19.1%	11.7%	9.3%
Offender & h'less	27.9%	14.9%	36.2%	19.1%	14.0%	12.2%
Offender & Subst	42.3%	27.9%	52.6%	23.5%	18.5%	4.9%
Offend h'less & Subst	38.0%	25.7%	48.9%	22.8%	16.2%	5.7%
Total	29.9%	18.1%	40.0%	20.4%	14.2%	8.8%
SMD 5D Cats						
Offender only	14.3%	7.1%	29.8%	17.4%	8.9%	12.9%
Offender & h'less	18.1%	9.4%	28.9%	16.6%	11.8%	16.5%
Offender & Subst	34.1%	18.9%	40.0%	16.7%	15.8%	9.1%
Offender & DVA	24.5%	15.9%	26.6%	15.5%	9.1%	4.6%
Offender & MH	15.1%	9.1%	27.4%	18.0%	10.8%	11.8%
Offender & 2 other	30.0%	17.8%	40.3%	21.5%	14.8%	9.0%
Offender & 3 other	41.9%	27.0%	51.1%	22.9%	16.3%	5.2%
All 5 domains	37.4%	22.5%	45.2%	23.4%	19.5%	6.5%

Source: authors analysis of SPS-Prisoners Survey 2015

For some children the care experience can be itself pretty unstable and unsettled. The table shows one indicator of that; prisoners who were in care and had three or more separate placements (fostering etc). This applies to 18% of all prisoners, rising to 26-27% of the highest SMD categories.

This table also shows some other indicators of disadvantage, including a combined learning difficulties/mental disorder category which is flagged for 40% of prisoners, rising to over 50% for some SMD groups, and difficulties with reading or number work (literacy/numeracy) averageing around 20% and up to 23% in some SMD groups (similar findings from OASys in England). Another indicator of some interest (as

something we found it very difficult to identify in recent Destitution research) is the flag for possible trafficking (and forced labour), which attaches to 14% of prisoners in Scotland, rising to nearly 20% for the highest level of SMD. The last indicator is a flag for people who were ever in the armed forces. Nothwithstanding a lot of lobbying and media comment on this supposedly vulnerable group, their presence within the prison system is not that great (8%) and there is little evidence of a relationship with higher levels of SMD. There is however some evidence of a relationship with homelessness and with mental health.

The GUS survey enables us to look at the presence of certain indicators of potential problems of child development at a critical age, around the beginning of school, and relate this to the SMD status of their parents. This provides some kind of test of the proposition that adult SMD can affect ACEs and other childhood problems. Table 47 presents a number of pertinent indicators from around Wave 5 of the survey, broken down by SMD levels on the ever 3D and 5D classifications.

Table 47: Selected indicators of child development issues for Scottish children around age 5 by SMD categories, 2005-06

SMD Categories	Absent father prob	Addit Suppt Needs	Accident Injury	Child Devel't Concerns	Child Supervised
Ever SMD 3D Number					
No disadv	**0.3%**	**1.6%**	**14.1%**	**10.6%**	**0.6%**
1 disadv	**1.6%**	2.7%	16.1%	**17.7%**	1.8%
2 or 3 disadv	3.0%	2.9%	14.8%	3.0%	1.5%
Ever SMD 5D Number					
No disadv	**0.2%**	**1.1%**	**13.2%**	**6.8%**	**0.4%**
1 disadv	0.4%	**2.3%**	15.1%	**17.2%**	0.3%
2 disadv	**1.9%**	**3.3%**	**18.0%**	**21.0%**	**3.9%**
3 disadv	2.9%	4.8%	19.0%	**24.0%**	1.0%
4 or 5 disadv	5.1%	10.1%	24.4%	5.4%	0.0%

Source: authors' analysis of GUS data

The first indicator highlights cases where there is not only an absent father but this absence seems to be creating some problems. This has a fairly low incidence and appears to rise markedly with SMD level, but not all differences are statistically significant owing the sample size (significant differences from 'no disadvantage' are shown in bold). Additional support needs identified at the beginning of the child's schooling are shown in the next column. Again, these rise with SMD level but not all differences are statistically significant. The third column shows accident or injury experienced up to this stage. There appear to be no differences across the 3D classification but there is some heightened risk across the 5D classification. The next column shows where the parents have expressed concerns about the child's development. Here there are significant differences between no disadvantage, and 1 disadvantage (3D) or 1-3 disadvantages (5D), but a lower incidence for the highest level of SMD count in each case. The final indicator is for child being supervised – this

would overlap with LAC and social work involvement. Again, there is a relationship but small numbers mean not all cases are significant.

Again, we compare these relationships with those observed in relation to the key deprivations of low income, poor neighbourhood or disability. In general, none of these outcomes show as strong an association with low income or poor neighbourhoods, but in a couple of cases there is as strong a relationship with disability (accident/injury, development concerns, supervision).

Parent-child relationships

GUS also contains some well-established scale measures of relationships, home life, emotional development and problems, and cognitive development. These are continuous variables, generally built up from Likert scales across multiple questions. Table 48 shows mean scores by SMD levels on the Order vs Chaos indicator and on the two components of the Pianta Parent-Child Relationship Scale, which reflect warmth and conflict respectively.

Table 48: Indicators of Home Life and Parent-Child Relationships

SMD Categories	Order vs Chaos	Pianta Warmth	Pianta Conflict
Ever SMD 3D Number			
No disadv	3.17	33.3	15.8
1 disadv	2.38	32.5	17.6
2 or 3 disadv	2.32	33.2	18.8
Ever SMD 5D Number			
No disadv	3.49	33.5	15.0
1 disadv	2.65	33.1	17.1
2 disadv	1.75	31.9	18.7
3 disadv	2.12	32.5	20.4
4 or 5 disadv	1.72	33.4	19.4
Range of indiv values	17	28	30
Standard deviation	2.35	2.86	5.81
Standard Error of mean	0.039	0.048	0.097

Note: Higher scores on col. 1 indicate greater order/calm and less chaos in the home; higher scores on col. 2 indicate greater warmth in parent-child relationship, while higher on col. 3 indicates more conflict. Cols 2. And 3. Based on Pianta Parent-Child Relationship Scale.

There is clearly some descent from order/calm towards or into chaos in families as the SMD level increases. Interestingly, there is not much difference in terms of warmth of relationship, but the level of conflict does increase with higher SMD. From the figures in the last row of the table (standard error of the mean) it can seen that the differences between SMD groups and the 'no disadvantage' group are quite large and likely to be

statistically significant. For chaos and conflict, there is less variation across income/poor neighbourhoods/disability than is shown here, but in the case of warmth there is actually slightly more of a relationship with these other disadvantage measures.

Child emotional development

Table 49 shows the results of the Child Development Strengths and Difficulties Questionnaire in Wave 5, including each component and the overall score, with the summary score for Wave 8 also shown.

There is overall quite a lot of similarity in the extent to which these indicators of greater emotional problems increase with SMD level, although there is less variation in the pro-social score and to some extent in the conduct problems score. Overall there is a strong upward trend in the scores with rising SMD level, meaning that children with parents who have ever experienced several SMD domains tend to display more emotional symptoms, conduct problems, hyper-activity/inattention, and (more marginally) peer problems.

Table 49: Components and Overall Scores on Child Development Strengths and Difficulties Questionnaire

SMD Categories	Emotional symptoms score	Conduct problems score	Hyper-activity or inattention score	Peer problems score	Pro-social score	SDQ Total difficulties score	SDQ Total Score Wave 8
Ever SMD 3D Number							
No disadv	1.21	1.69	3.64	1.03	8.22	7.57	6.80
1 disadv	1.62	2.18	4.39	1.34	8.07	9.52	9.85
2 or 3 disadv	1.76	2.44	5.08	1.46	8.18	10.74	11.06
Ever SMD 5D Number							
No disadv	1.05	1.50	3.36	0.88	8.32	6.78	6.04
1 disadv	1.45	1.99	4.16	1.30	8.05	8.88	8.44
2 disadv	1.83	2.51	4.74	1.51	7.89	10.60	10.44
3 disadv	2.24	2.79	5.09	1.70	8.07	11.82	12.05
4 or 5 disadv	2.28	2.84	6.09	1.89	7.70	13.10	13.80
Range of indiv values	9	10	10	8	10	30	31
Standard deviation	1.50	1.45	2.33	1.39	1.67	4.70	5.67
Standard Error of mean	0.037	0.027	0.046	0.032	0.029	0.107	0.107

Note: for all scales except pro-social, higher scores imply more difficulties.

It is noteworthy that between waves 5 and 8, the 'slope' of the SDQ total scores got steeper, implying that the disparities were widening somewhat. All of these sub-dimension scores are more related to (parental) MH than other SMD domains, except for pro-social which is more related to substance. The relationships of SDQ scores to SMD are stronger than their relationships to low income, poor neighbourhoods or disability. Homelessness and parental MH appear to be more related to children scoring higher on emotional difficulties.

Child cognitive development

Selected cognitive test scores for GUS children are shown in Table 50, again showing average values by SMD level. Two tests suitable for 5 year olds at Wave 5, and a language test score from Wave 8, are shown.

Table 50: Cognitive test scores for children in GUS at Waves 5 and 8 by Ever SMD categories of parents

SMD Categories	Picture Similarities T-Score W5	Naming Vocabulary T-Score W5	Language Score W8
Ever SMD 3D Number			
No disadv	58.7	58.8	69.4
1 disadv	57.0	57.4	67.1
2 or 3 disadv	56.1	54.4	63.0
Ever SMD 5D Number			
No disadv	59.1	59.7	69.5
1 disadv	57.8	57.3	68.9
2 disadv	57.5	56.7	67.0
3 disadv	53.9	53.3	64.2
4 or 5 disadv	56.4	56.2	63.4
Range of indiv values	60	60	76
Standard deviation	10.62	10.62	10.44
Standard Error of mean	0.180	0.179	0.199

Again, and largely in line with expectations, these scores fall as levels of SMD rise, the only exceptions being the move from 3 to 4/5 disadvantages in the 5-D classification. In these cases, the degree of difference is similar to that found across the income and disability groups.

11.4 Modelling Child Development Outcomes

The GUS survey is particularly useful for looking at the relationship between particular adult and household attributes or experiences and child development outcomes. In this context we are particularly interested in the role of parental SMD. Does parental SMD, in general, or in a particular form, have an adverse impact on child development and outcomes? Is that effect direct, or is it partially mediated through other measurable factors? We present evidence on this based on exploratory regression modelling of some key child development outcomes, particularly the (SDQ), emotional difficulties

score at W5 and W8, and some education-related outcomes (cognitive scores at W5, language scores at W8). In addition to SDQ, we look at the Pianta 'Conflict' score as this appears potentially more significant as a mediating factor.

Table 51 presents an OLS regression model for the Pianta conflict score at Wave 5. This model is not particularly sophisticated and only explains about one-fifth of the variance. Perhaps unsurprisingly, the strongest predictors (based on size of standardised 'beta' coefficients) are the Pianta 'warmth' score and the Order-vs Chaos score, both of which have an inverse (negative) association with conflict. After that, the next most important association is the Ever SMD (5D) score with a beta of 0.156. This seems to suggest that SMD can be a substantial aggravating factor in relation to parent-child conflict.

Table 51: Regression Model for Pianta 'Conflict' Score at Wave 5

Variable	Coeff B	Std Coeff Beta	t	Sig.
(Constant)	35.054		23.64	0.000
eversmd5dno	1.157	0.156	8.35	0.000
Lltid (long term illness/disab)	1.114	0.038	2.15	0.032
Absfathprob (absent father problems)	-2.979	-0.039	-2.20	0.028
Workr (respondent works)	-1.023	-0.043	-2.39	0.017
Noqualr (no qualifications)	-1.198	-0.045	-2.52	0.012
Hiqualr (high qualifications)	0.790	0.067	3.76	0.000
Poorrelptnr (poor relationship with partner)	1.285	0.069	3.83	0.000
Chaosscr (Order vs chaos score)	-0.633	-0.253	-13.79	0.000
PiaWarmth	-0.514	-0.213	-11.86	0.000

Model Summary	
Adj R sq	0.194
Std Err Est	4.840
F ratio	71.1
N of observations	2,626

Other factors in this model include apparent negative (alleviating) relationships with parent being in work, having no qualifications, or there being issues with an absent father, while positive (compounding) relationships appear to be associated with higher qualifications or having a poor relationship with current partner. A couple of these apparent effects seem counter-intuitive, and while these may still be explicable it is also possible that they have arisen by chance or because of other limitations of the model. The absent father indicator may really indicate a legacy of a problematic,

possibly abusive relationship with a former partner; however, the fact that the partner has gone then, for child and family remaining, becomes a positive factor in reducing conflict. The relationship with qualifications is a bit more surprising, but might indicate that, where a mother has more education, there is more potential for challenge and debate about issues in the household.

The second model presented (in Table 52) is an OLS regression for the overall SDQ emotional difficulties score measured at Wave 8, which is roughly the end of the primary school years. A similar model was also fitted at Wave 5. The model shown explains about a third of the variance. The most important explanatory variable is the one just modelled above, PIA Conflict score, which is associated with a substantial increases the child's emotional difficulties (beta =0.271). The second most important explanatory variable is our 'Ever SMD (5D)' score (beta=0.141); despite the potentially mediating role of conflict, SMD appears to still have an substantial independent association with emotional difficulties alongside that. Other quite important factors in this model are additional support needs being identified in schools (beta=0.127), particularly social/behavioural but also learning difficulties, and again the order vs chaos in the home indicator (beta=-0.105).

Table 52: Regression Model for Total SDQ Emotional Difficulties Score at Wave 8

Explanatory variables	Coeff B	Std Coeff Beta	t	Sig.
(Constant)	12.394		8.88	0.000
eversmd5dno	0.925	0.141	7.59	0.000
lltid- LT illness/disab	1.034	0.045	2.71	0.007
Equiv income quintile	-0.181	-0.047	-2.20	0.028
MDscr (material depriv)	0.124	0.031	1.54	0.123
hht2 (household type cpl)	-0.693	-0.046	-2.19	0.029
age4 (banded age)	-0.455	-0.054	-3.16	0.002
Nocar	0.390	0.024	1.20	0.231
Workh (hhd has FT wkr)	-0.207	-0.025	-1.08	0.279
Hiqualr (higher qualif)	-0.635	-0.054	-3.04	0.002
Chaosscr (order vs chaos)	-0.255	-0.105	-5.95	0.000
PiaWarmth	-0.201	-0.098	-5.91	0.000
PiaConflict	0.263	0.271	15.44	0.000
Chdhlthbad (poor child healtj	1.461	0.017	1.09	0.276
asnW8 Additional support	2.636	0.127	7.08	0.000
asnldW8 Learning Diffic	5.543	0.073	4.43	0.000
asnsbdW8 Social/behav	5.419	0.111	6.39	0.000

Model Summary	
Adj R sq	0.322

Std Err Est	4.440
F ratio	81.0
N of observations	2,698

It is noteworthy that although there are associations with income and material deprivation and no car variables, these are smaller in magnitude (beta values -0.045, 0.031 and 0.024). There are some demographic effects, couples and older parents being associated with reduced scores, while higher qualifications as well as full time working are also associated with reduced scores. Illness/disability (LLITD) of carer as well as child poor health also appear have some smaller positive association with emotional difficulties.

The other aspect of child development we look at here is the children's cognitive and educational progress. Two indicators are examined here, firstly the combined score on the two main cognitive tests performed at Wave 5, and secondly the score on language development from Wave 8. In each case we fit a similar regression type of model, testing for the role of the SMD indicator also some of the emotional and social development variables just discussed.

Table 53 shows a regression model for the combined score on cognitive tests at Wave 5. In this model insignificant variables have been removed, making for a more parsimonious model. However, it can be seen that this model has a lower explanatory power than those previously considered, explaining only 13% of the variance. It seems that SMD score (Ever, 5D) does not make a significant independent contribution to explaining variations in cognitive ability at this stage. However, it can be seen that the SDQ emotional score is the strongest predictor, so this may be in part mediating any SMD effects.

Table 53: Regression model for combined score on cognitive tests at Wave 5

Variable	Coeff B	Std Coeff Beta	t	Sig.
(Constant)	57.304		28.47	0.000
Overall SDQ Emot Diffic Score	-0.287	-0.152	-8.77	0.000
Low income (Q1 equiv)	-1.990	-0.096	-5.23	0.000
Poor n'hood (SIMD 15%)	-1.058	-0.045	-2.68	0.007
Absent father probs	-4.808	-0.037	-2.32	0.020
Minority ethnic	-2.411	-0.057	-3.58	0.000
No car	-1.135	-0.048	-2.61	0.009
No qualifs	-2.558	-0.081	-4.85	0.000
Hiqh qualifs	2.018	0.105	6.23	0.000
Pianta 'Warmth'	0.198	0.063	3.73	0.000
Additional support needs	-3.986	-0.056	-3.54	0.000

Model Summary	
Adj R sq	0.131
Std Err Est	8.100
F ratio	53.3
N of observations	3,478

Other explanatory factors in this model are broadly in line with expectations based on the wider educational attainment literature. Lower achievement is associated with low income and living in a poor neighbourhood, by the mother/(principal carer) having no qualifications, by having additional support needs, being from an ethnic minority, having no car, or having problems with an absent father. Higher achievement is associated with by mother/PC having higher qualifications and by a warm emotional bond with parent (Pianta).

Table 54 jumps forward to Wave 8, near the end of the primary school years, and looks particularly at language development. This time we include prior attainment on the cognitive scores as just discussed, and as expected this is the most powerful predictor (beta=0.406), capturing both innate ability and a good early start. This also helps to raise the overall explanatory power to 24% of variance explained. The model has some similarities, again excluding our SMD indicator (eversmd5no), although this may have some effects mediated through SDQ (which is significant) or other factors. The general poverty factor is represented by material deprivation, which has a significant negative association. As before, higher age and high qualifications of mother/PC are positive as is the Pianta warmth factor. Additional support needs in general have a negative association , as expected, but slightly surprisingly the sub-category of social and behavioural support is positive. This might indicate that such children are lively/disruptive because of higher ability, and/or that they respond positively to the additional support attention given. Mother having a limiting long term illness or disability is marginally positive, which is not as expected, but this effect is not significant at the 5% level.

Table 54: Regression model for language test score at Wave 8

Explanatory Variables	Coeff B	Std Coeff Beta	t	Sig.
(Constant)	33.999		12.32	0.000
Combcogscr	0.509	0.416	24.06	0.000
De SDQ: Total difficulties score	-0.139	-0.060	-3.29	0.001
Lltid	1.322	0.030	1.79	0.074
MDscr	-0.464	-0.061	-3.48	0.001
age4	0.582	0.037	2.12	0.034
hiqualr	1.953	0.088	5.04	0.000
PiaWarmth	0.119	0.030	1.73	0.083
asnW8	-1.860	-0.047	-2.64	0.008
asnsbdW8	4.655	0.048	2.69	0.007

Model Summary	
Adj R sq	0.244
Std Err Est	8.795
F ratio	101.0
N of observations	2,792

To sum up this section, we have shown that, after controlling for other significant variables, parental SMD has a clear association with aspects of relationships in the household (greater conflict) around age 5, and that it has direct as well as probably indirect associations with children's emotional difficulties at ages 4/5 and 9/10. These associations are relatively substantial and significant, and probably somewhat bigger (for those affected) than those associated with of poverty. These effects may then have further second-order impacts on cognitive and language development. The modelling captures a mixture of effects which are contemporaneous (cross-sectional) but also also some which are sequenced in time (i.e. factors in earlier waves affecting outcomes in later waves). Such statistical associations do not prove causation, but taken in conjunction with other evidence (including the qualitative evidence gathered in other parts of this study) they do build a picture of some likely causal mechanisms and of the relative importance of different factors.

There is growing interest in the role of Adverse Childhood Experiences (ACEs) in affecting later developments in the transition to adulthood, potentially ending up re-creating situations of 'SMD' in adulthood. Part of this discussion focuses on the potential for adults who experience SMD themselves, through their relationships with their own or others' children, to contribute to such ACEs. The analysis in this and earlier sections sheds some light on these potential links, although inevitably the relatively small sample size of GUS places some limitations on this. The conclusions

summarised in the preceding paragraph are consistent with this account, and also reinforce conclusions drawn from comparing bivariate relationships between emotional and cognitive development and SMD alongside those with economic deprivation indicators.

12. Qualitative Research Methodology

In addition to the multi-stage, multi-component quantitative study described above, there was also a very significant qualitative dimension to the Hard Edges Scotland study. As in England, we commenced the project with a series of national-level key informant interviews with stakeholders in the fields of homelessness, substance dependency, criminal justice, mental health, public health and domestic violence/abuse.

However, unlike in England, we additionally conducted six in-depth case studies of local systemic responses to SMD, which were designed to capture the perspectives of both people with first-hand experience of SMD and the service providers charged with supporting them. Prior to this case study fieldwork commencing, 'Lived Experience Reference Groups' were established by Glasgow Homelessness Network to help shape the content of the qualitative research.

We now provide some further details on each of these aspects of the qualitative research carried out.

12.1 National-Level Key Informant Interviews

A strong theme to emerge from early consultations on Hard Edges Scotland project was the importance of undertaking a significant range of national-level key informant interviews to sensitise the research team to the specific Scottish context for the work. This was not only to examine definitional and data issues, as was the main focus of the key informant interviews in Hard Edges (England), but also, and more significantly, to explore policy developments and networks in Scotland, with a view to identifying opportunities for influence, impact and collaboration.

We conducted 15 such one-to-one interviews as a formal aspect of the Hard Edges Scotland fieldwork. This included interviews with key stakeholders from statutory and voluntary sectors in the fields of homelessness, substance misuse, justice, mental health, public health and domestic violence and abuse. These interviews were semi-structured following the Topic Guide included as Appendix F. Most key informant interviews were fully transcribed, with permission, and thematically analysed. However, in some cases a "notes and quotes" format of write-up was used instead. This was generally where a large component of these interviews comprised technical data discussions which it was not considered cost-effective to fully transcribe.

We maintained ongoing contact with many of these key informant stakeholders throughout the life of the project as a means of maximising the sense of cross-sectoral 'ownership' of the research results, and also to assist with access to relevant datasets and to intelligence on upcoming policy developments. Several of these key informants additionally participated in the Project Advisory Group.

12.2 Lived Experience Reference Groups

Prior to the case study fieldwork commencing, two 'Lived Experience Reference Groups', one male and one female, were established by Glasgow Homelessness Network to help shape the content of the in-depth interviews with people with first-hand experience of SMD.

The decision was made to facilitate two parallel reference groups in order to capture the specific priorities of men and women with experience of SMD, and to ensure that space was provided to allow all voices to be heard safely.

Both the male and female groups met three times between the end of April and end of May 2017, with each following the format of:

- An introduction to questions: why they are important, what makes a question good or bad?
- What topics should be prioritised in the Hard Edges Scotland research: based on your own experience what would you ask about?
- Consolidation and review.

In total, 15 people participated in the Lived Experience Reference Groups, 8 men and 7 women. Of the 15:

- 11 had experience of homelessness, addictions and offending;
- 3 had experience of homelessness and addictions;
- 1 had experience of homelessness and offending;
- 15 had experience of mental ill health (in a small number of cases severe enough to lead to hospital admissions).

Care was taken to invite membership from as wide a range of services as possible, covering all aspects of SMD. The 15 participants were recruited from:

- Sacro, Tomorrow's Women (justice-related services);
- Turning Point Scotland, Aspire, Chara Centre (homelessness-related services)
- Local recovery networks (addictions-related services).

These group meetings all took place in Glasgow and were facilitated by Claire Frew from Glasgow Homelessness Network. Members of the groups had their expenses met and also received a small thank you payment (£20) for attendance at each meeting.

The full report from the Lived Experience Reference Group can be found at Appendix A.

12.3 Case Studies

Qualitative first-hand perspectives comprised a relatively small element of the original Hard Edges (England) study, and we aimed to significantly strengthen this dimension

of the research in Hard Edges Scotland by conducting in-depth interviews with 40 users of SMD-related services.

The purpose of these interviews with people with direct relevant experience was two-fold. First, to illuminate the routes into SMD experienced by people in contemporary Scotland, and in particular any 'missed' opportunities for preventative or early interventions. Second, to explore in detail interviewees' interaction with an array of services charged with dealing with various aspects of SMD, with a view to identifying opportunities for systems improvement and change.

While it was always envisaged that these 40 interviews with people with first-hand experience would be 'clustered' in specific local areas, in order to provide some 'fixed' context and continuity between accounts, the initial project grant from LankellyChase did not allow for these 'clusters' of interviews to be worked up into fully-fledged case studies. In other words, the idea was that we would simply interview relevant service users in each locality rather than consult with the local service providers or analyse local data and statistics.

However, it became apparent during Project Advisory Group and other discussions with senior national stakeholders that a more in-depth and holistic analysis of local systemic responses, taking account of service provider perspectives and service contexts, would significantly bolster the policy and practice-influencing agenda that was the ultimate purpose of the study.

Supplementary funding was therefore secured from Robertson Trust which allowed us to conduct six in-depth case studies, which comprised, in addition to the interviews people with first-hand experience of SMD:

- 2-3 service manager/strategic-level key informant interviews per case study site;
- 1-3 focus groups of frontline workers per case study site, drawn from both statutory and voluntary sectors;
- analysis of local statistics, policies and procedures;

The selection of these case study local authority areas was informed by the statistical analysis undertaken for the study, with a view to capturing a cross-section of areas with higher and lower rates of SMD, as well as the inclusion of cities, large towns, and rural areas across Scotland, and also east, west, southern and more northern parts of the country.

The decision was taken to offer anonymity to all of the case study locations so that the individuals interviewed within them could speak as freely as possible. We took the view that an enhanced degree of anonymity was particularly important in as sensitive and exploratory a study as this in order to encourage maximum candour. The point of this case study exercise was not to ‘name and shame’ particular local authorities and services, but rather to identify the current ‘reality’ across Scotland, with a view to encouraging a collective step forward in the country as a whole.

In order to preserve this anonymity, we cannot provide a detailed profile of the six case study areas included in the research. However, we can note that the final selection included:

- two urban areas in the Central Belt (neither of them Glasgow, given that the in-depth qualitative work with the Lived Experience Reference Groups had already taken place in Scotland's largest city);
- one urban area outwith the Central Belt;
- two 'semi-rural' areas, one north and one south of the Central Belt;
- one largely rural area.

In total, across the six case study areas, 25 local key informants were interviewed, eight focus groups were conducted with frontline workers (involving 47 workers in total), and 42 in-depth interviews were completed with people experiencing SMD who were using relevant services (10 women and 32 men). The slight overshooting of the target number of interviews with people with first-hand experience reflected the fact that fieldwork was taking place simultaneously in a number of case study areas. The scale of fieldwork varied between the different case studies, reflecting the fact that the size of the service network, and SMD population, differed significantly between the larger urban and some of the other case study areas.

Both interviewees with direct experience of SMD and service provider interviewees were drawn from across the homelessness, mental health, drugs and alcohol, criminal justice, and domestic violence and abuse sectors. The interviewees with first-hand experience were deliberately sampled to prioritise those with the most complex experiences of SMD, in order to 'test' local system responses as much as possible. This meant that most of these interviewees had faced combinations of homelessness, substance misuse, mental ill-health and offending histories, alongside pervasive forms of trauma that stretched back into their childhoods, and which very often included extensive experience of various forms of violence and abuse.

That said, the relatively small numbers of people with relevant experiences in the rural case study area meant that the individuals interviewed there had a slightly different profile. Several were sex offenders who had had stable lives prior to being prosecuted for their offences. Though these individuals had subsequently experienced homelessness and/or mental ill-health, and thus fitted our definition of SMD, they tended not to have had substance misuse problems, and had not necessarily experienced childhood trauma. It was instructive to note that this group seemed to find it much easier than those with more trauma-affected and chaotic lifestyles to acquire the support they needed from relevant systems.

All interviewees with direct experience of SMD had their travel expenses met (if any) and received a small payment (£20) in compensation for their time.

The topic guides used in the interviews with both local key informants and people with direct relevant experience are included in Appendices B and C respectively. As noted above, the topic guide used with the people with first-hand experience in particular was informed by the insights offered by the Lived Experience Reference Groups.

The topic guide used for the focus group discussions with frontline workers included the use of *'vignettes'* (hypothetical but typical cases) to explore local service responses to a range of groups likely to be affected by SMD (see Appendix D for the topic guide and vignettes deployed). This vignette methodology provides a powerful means to systematically compare responses to people in similar circumstances in varying

service contexts. Moreover, the hypothetical nature of these vignettes provides a ‘safe space’ to encourage discussion of sensitive topics.

All of these case study interviews and focus group discussions were fully transcribed, with permission. While NVivo software was used to code and aid retrieval of this qualitative data on a thematic basis, the main analytical focus in the qualitative part of the study comprised the production of detailed case study reports on all six local areas. These case study reports combined ‘thick description’ of the local service and statistical context in these areas, with analysis of the qualitative data generated by the local key informant interviews, frontline service provider focus groups, and in-depth interviews with people with direct experience of SMD. A standard template was used to structure these case study reports in order to aid systematic comparisons between them (see Appendix E for the template used).

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APPENDIX A

Hard Edges Scotland:
Lived Experience Reference Group

By Claire Frew

May 2017

A.1 Lived Experience Reference Group: Role and Membership

1.1 The Lived Experience Reference Group was established as a core part of the Hard Edges Scotland project to support the qualitative element of the research. The central function of the group was to help shape the content of the qualitative interviews by people using their own experiences of severe and multiple disadvantage – as well as their often extensive experience of answering the questions of staff and researchers – the topics they would prioritise.

1.2 Two parallel reference groups were facilitated to capture the specific priorities of men and women with experience of severe and multiple disadvantage, and to ensure that space was provided sensitive to specific needs and allowing all voices to be heard safely.

1.3 Both groups met three times between the end of April and end of May 2017 with each following the format of:

- An introduction to questions: why they are important, what makes a question good or bad?
- What topics should be prioritised in the Hard Edges research: based on your own experience what would you ask about?
- Consolidation and review.

1.4 15 people participated in the reference groups, 8 men and 7 women. Of the 15:

- 11 had experience of homelessness, addictions and offending;
- 3 had experience of homelessness and addictions;
- 1 had experience of homelessness and offending;
- 15 had experience of mental ill health (in a small number of cases severe enough to lead to hospital admissions).

1.5 Care was taken to invite membership from as wide a range of services as possible, covering all aspects of severe and multiple disadvantage. The 15 participants were recruited from:

- Sacro, Tomorrow's Women (criminal justice);
- Turning Point Scotland, Aspire, Chara Centre (homelessness);
- Local recovery networks (addictions).

A.2 Key Themes to Explore in Qualitative Interviews

Both groups were encouraged to think of missed opportunities in their own lives to either prevent situations getting worse or to help them get better.

A.2.1 Missed Opportunity: You are judged on your past, not your future

This was a common theme across both groups, although particularly strong amongst men, that staff in services look at your past before your future, judging you on 'bits of paper' rather than getting to know you and taking you 'at face value'.

This was identified as a missed opportunity as it immediately builds a feeling of mistrust and a sense that services aren't really there to help, often stopping people from engaging. Nobody was looking for the language of 'goals, assets, or aspirations' (seen as remote), just the sense that there is hope for the future.

Linked to this lack of focus on a positive future, the prevailing view that 'it's all we've got and it's better than nothing' is so common in crisis service provision that it gets in the way of finding lasting solutions, creates the impression that nobody is looking for lasting solutions, and deters people from asking for or expecting more.

A.2.2 Missed Opportunity: The system is there to test you

The complexity of the system – with services focusing on a single issue and staff working to tightly defined remits – leads to people experiencing severe and multiple disadvantage often finding themselves going in the 'wrong door' and speaking to the 'wrong person'. Finding your way to the 'right door at the right time' was seen as a test that few people manage to pass.

As a member of the men's group noted, 'the system itself is a missed opportunity.'

It was clearly identified by both groups that the implications of this can be very serious.

One particularly difficult example was raised of a young woman disclosing sexual abuse by her brother but to someone who did not have that 'remit'. With the information not being shared the young woman, following a period in hospital as a result of mental ill health, was discharged back to the care of her brother.

Even if such serious consequences are avoided, both groups were clear that it is not unreasonable for people at their most vulnerable to believe that disclosing sensitive experiences once would be enough but that saying it to the 'wrong person' was the same as not saying it at all. Which in turns means people won't say it again, missing the opportunity to get at the root of the problem.

One final aspect of this as a missed opportunity is that all participants identified that the one question they are very rarely asked is 'how can we help you?' Staff either tell you 'what they will do' or offer little unless you directly ask for it. Like many elements of the system this stops people asking for help.

A.2.3 Missed Opportunity: You only get help in a crisis

Linked to the complexity of the system there was a common view that you will only get help if you are in a real crisis – the example of multiple suicide attempts over one weekend before 'getting anyone's attention'. Everyone recognised the importance of early intervention, but the men's group prioritised a discussion around what it is that makes you ready to accept help from someone or understand that you need help.

One example was of a young man who described 'going to rehab, doing the wrong thing, kicked out. Going back to rehab, doing the wrong thing, kicked out. Back again, did the right things. But what was different?'

Another member of the group described the first time, after many years of severe and multiple disadvantage, that they 'opened up' to an addictions worker in a way that had never been able to before.

When discussing why the time felt right and they were ready to move forward, common themes included feeling safe, feeling like they weren't being judged, focusing on positives rather than negatives.

However, other common phrases people used that helped explain why was 'I was beat' and 'the penny finally dropped' that things had to change. A sense that, as much as a positive environment can help, sometimes the motivations for change are negative and that you never know when the personal realisation will come. And just because you haven't always done well in services in the past doesn't mean they should 'close their doors to you' in the future.

A.2.4 Missed Opportunity: Conflicting priorities and motivations within the system

A particular complexity of the system when you are experiencing severe and multiple disadvantage is that the constituent parts (homelessness, criminal justice, addictions) do not always have a common, or even complementary, goal.

This conflict was most commonly identified, particularly in the men's group, in the example of people entering rehab with the sole intention of avoiding a prison sentence. Several men in the group described having done this with only one identifying any kind

of positive impact ('it pointed me in the right direction'). For everyone else it was a case of 'sitting it out' until the prospect of prison was gone and you had 'made a good impression, looking like you're trying'. There was no judgement of people making this choice, just the common observation that avoiding a prison sentence was a 'negative rather than positive motivation' for entering rehab, and without positive motivation 'it won't work.'

The missed opportunity was seen as services being full, but not by people who need or want to be there. Rehab being full of people trying to avoid prison, emergency accommodation full of people waiting for a place in rehab … services are stretched to capacity but people are in the wrong place.

A.2.5 Missed Opportunity: Overreliance on medication and prescriptions

Whether for addictions or mental ill health there was a common agreement, most strongly in the women's group, that the first port of call for staff is to 'medicate you, whether you want it or not'. There were examples of people having to fight not to be prescribed medication they did not want, but not getting anywhere because 'medicating us is easy.'

Furthermore, both groups agreed that in such circumstances, the decision is made before you even walk in the door, it is not even a personalised medical response to your circumstances.

People realised it is a difficult balance to strike as there are others out there not getting medication they need, but when people are in crisis it is seen as a 'quick fix' that can solve problems 'for staff but not people.'

For some, the resistance to medication was that 'they knew themselves' how it made them feel and wanted to avoid it. Others noted a fear of addiction to other kinds of pills. But when it came to alternatives such as counselling, very rarely would this be discussed.

A.2.6 Missed Opportunity: Staff know best

This thread runs throughout many of the themes, with the missed opportunity being that people are rarely asked what is important to them or what they think will help them.

However, there were mixed views amongst the two groups about this with women being clearer that 'you know yourself' and that people should be trusted more rather than assuming that 'you don't know anything because of where you are'. There was also a very strong view in the women's group that staff are often unqualified to make any professional judgement about you – 'they don't know what they are doing.'

While the men's group did recognise this, there was also the view that, when your life is chaotic you often don't know what it is that you need – 'you just need help' – and that you are completely reliant on services understanding what you need and providing

it (made difficult due to the common lack of trust, and that you might have gone back in the 'wrong door').

But overall, both groups agreed that decisions should be two-way, even if it's 'not easy when you are at rock bottom.'

A.2.7 Missed Opportunity: Family and children as part of the solution

Contact with family and children was identified by both groups as a sign that things are improving. But the role of services in helping rebuild or protect positive relationships was highly sensitive.

Members of each group could describe 'burning bridges' with family and friends when things were at their worst, with one in particular noting that 'staying away was the only way I could protect them.'

But would it make a difference if services asked you about your family and whether you wanted contact with them? All members could see difficulties as 'family might have caused your problems' or you might not have any close family (one young man in the group became homeless after losing both of his parents and not being able to maintain the family home on his own).

But aside from these circumstances both groups discussed whether it would make things better if family relationships were raised earlier. A key observation, particularly from the men's group, was that professional services never ask about your family, but peers (either formally or informally) almost always approached the subject in some way, and that there was a far higher level of trust amongst peers.

On the issue of children, there were split views between the groups. Both men and women taking part were parents and there was agreement that children are not part of any discussions unless there are ongoing legal/custody issues ('another problem to solve').

The parents within the women's group were clear that children should be considered more centrally as part of support plans as they are the 'motivation for getting better' and not being with them 'makes everything worse'.

However, the men's group saw their parental role as something they would think about once they'd 'sorted themselves out' and that it might be added pressure to think about it when you are vulnerable.

A.2.8 Missed Opportunity: Not enough peer support

The lack of trust in services and the system as a whole was equally shared across both groups, as was the view that peer relationships are often more positive as they are built on a shared understanding of:

- the damage caused by being judged;

- the importance of hope for the future; and
- the reality of the fear felt by people every day.

Even though peer support models are becoming more developed and more commonly available people felt they were still thought of as ‘second class’ when they are often the most important, and not prioritised.

All 15 members of the reference group identified the positive impact that a peer (either just someone else using a service or someone in a formal support role) had played in helping them, and the same could not always be said for services or professional staff.

APPENDIX B

Hard Edges Scotland
Local Key Informant Topic Guide

- Explain nature and purpose of research (explain confidentiality/anonymity and ask permission to record).
    - Explain how we define SMD
- Their job role; how long they have been in that position/organisation; the scope of their responsibilities/knowledge (esp with respect to homelessness, offending, addictions, MH and DV).
- Nature of organisation, including: nature of service provided/policy functions performed; nature of the SMD groups they work with; roughly what proportion of their service users are SMD (e.g. small minority, almost all, etc.?)
- To what extent is SMD a significant issue in the local area? What sort scale/type of issue is it? What sorts of groups are affected?
- Any notable changes over time in terms of scale/nature of problems/characteristics of those affected? What are the typical pathways into SMD in the locality?
- How effective is the local service network for supporting people affected by SMD? How effective is the local service network and local policies in preventing SMD?
- What are the strengths/weaknesses/gaps? Any recent/imminent changes in policy, local service provision/commissioning etc.?
- What aspects of the national / higher-level systems [policies, organisational structures] are helpful/unhelpful in alleviating SMD locally?
- If they could change the local/national systems, what would they change and why? *Probe: piecemeal change vs whole system change*
- Which are their key partner organisations in working with SMD groups locally? (Ask for details/key contact in each as follow up)

- Which organisations are really crucial to have represented in the frontline workers' focus group(s)? Which organisations are likely to be most helpful in terms of accessing service users?

- Any key local documents/statistics/policy papers we should look at to understand nature of the challenges and responses locally?

- Ok to come back with queries/to fact check the (brief) case study report?

APPENDIX C

Hard Edges Scotland
Service User Topic Guide

Preamble:

- *Reiterate purpose of study*
- *Reiterate assurances re confidentiality/anonymity*
- *Reiterate we are independent from service providers and authorities*
- *Reiterate that participation entirely voluntary, will not affect the service they receive in the future, can refuse to answer any questions/stop at any time, with no consequences whatsoever*
- *Ask permission to record discussion*
- *Any questions?*
- *Sign consent forms*

1. Current Situation/Background

- Ask (first) name and age
- Where are you living at the moment? How long have you been living there? Where were you living before that? Does anyone else live with you (probe h/h composition -partners, children, siblings, etc.)?
- Have you always lived in this area? Have you moved around much? Why go/come back/move here?
- Where did you grow up as a child? How were things at home/how did you get on with your parents/carers? *[Probe on parents/carers homelessness/addictions/offending/MH/DV/poverty when they were growing up if feels comfortable]*
- Ever live in care as a child (how long for/when did you leave/ any aftercare)? *[Probe about running away too if feels comfortable]*
- How did you get on at school? Were you excluded at all? Did you truant? Any qualifications? What did you do when you left school? (Prompt for working history)
- Are you working/training/studying at the moment? On any benefits? Which ones?

2. Homelessness

- Have you ever been homeless? (probe definition of homelessness. Prompt on rough sleeping, hostels/night shelters/refuges, B&B, staying temporarily with friends/relatives, squatting, TFF, etc.)
- When did this first happen/ how often/how long for?
- Was that around here or somewhere else?
- Did anyone help you? What did they do? How did you find out about that help? Did you actively seek help or was it offered to you? Did that help sort out your situation? Why/why not? Was there anything else going on in your life at that time? Did they help with those things too/did anyone else?
- Did you apply as homeless to the council? What did they do? Was that helpful?

3. Health

- Do you have any health problems - physical/mental/disabilities? *[Probe for common mental disorders – depression, anxiety etc.]*
- When did they start? What caused them/what else was going on in your life at that time?
- Any diagnosis/treatment/medication? How did you feel about that? Was it the right thing to do/did it help?
- Have you ever been in psychiatric hospital/other long-stay medical care? Ever use A&E/other emergency healthcare? Why did you need to go to hospital? How long were you in hospital/how often in A&E?
- Where did you go next? Was any support/aftercare provided? How helpful was that? Did you get any help with the others things going on in your life too?

4. Addictions

- Do you drink/take drugs? Does it cause problems in your life? When/why did you first start having problems with drink/drugs? What else was going on in your life at that time?
- Have you had treatment (probe type/intensity)? What did you think of that treatment? Was it what you needed/when you needed it? Did you want the treatment offered or was it imposed on you ? *[Probe choice of e.g. medication or other therapeutic approaches]*
- Anything that could have been better/different? How easy was it to access treatment? Did you get any help with the others things going on in your life too?

5. Offending/DV

- Have you ever been in trouble with the police/in prison? When did that first happen? What else was going on in your life then?
- How often have you been in prison/how long in total/longest sentence? What happened when you came out - where did you go? Did you get any help? How useful was that? Did you get any help with the others things going on in your life too?
- Have you been a victim of violence/abuse? From a spouse/partner/other people? What impact did that have on your life *[just probe circumstances as far as they seem comfortable]* What if any support did you get with that?

6. Services

- Of all the services you are in touch with/have been in touch with, which are/have been the most helpful? *[Use local names for: Housing Options/Homelessness, addictions services, social work (including criminal justice SW), health services (including MH), DV services, housing support workers, (other) third sector services/agencies?]*
- What is it about them that is helpful? Why are others less helpful? What is it they do well? What makes the difference?
- Which are worst/least helpful? Why do you say that?

- Do they feel like these services are working together?/sometimes against each other? Do they share information that you have given them with each other? Is that a good thing or not?
- Which of these services were you in touch with first? Do you think that made a difference to how the others treated you?
- Are there things you need or want that you aren't getting help with? Which are the most important things that are missing from the help you get? *[Prompt on - help with housing, employment/education/training/purposeful activity, MH, physical health, DV, family/child contact, other social relationships, social activities/engagement, etc.]*
- Looking back, did you always get the help you needed when you needed it? Were there 'missed opportunities' when things might have been made easier for you? Who/what/when/what difference could this have made?
- How do you think things could be made better for people going through what you went through?

6. The future

- What sorts of things do you like doing/are you good at? Do you ever get a chance to do those things? What would make it easier to get more involved in those things?
- What sort of help would be most useful to you right now/what is the most important thing that would make your life better just now? Is anyone helping you with that? What are they doing?
- What are your hopes for the future? Where would you like to be in 1/5 years time?
- Is there anything else you think we should know/should have asked about?

APPENDIX D

Hard Edges Scotland
Vignettes for Frontline Workers

Preamble:

- *Reiterate purpose of study*
- *Describe process of discussion and purpose of vignettes. (Important: emphasise that there is no 'right' answer; the vignettes are merely tools to prompt discussion about complex issues)*
- *Reiterate assurances re confidentiality/anonymity*
- *Ask permission to record discussion*
- *Any questions?*
- *Sign consent forms*

Process: Circulate each vignette (printed on separate laminate cards) to all attendees one at a time, in the order listed below. Allow participants a few minutes to read it, then facilitate discussion using the questions/prompts, allowing time for any broader reflections at the end.

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1. Mary

Mary, who is now aged 20, had a difficult childhood and spent a few months in care when she was 14 years old after running away several times. Mary left home aged 17, after a particularly bad fight with her stepfather who has an alcohol problem. At first she stayed with an aunt, and then various friends. She moved in with an older boyfriend for a while and when she was living with him developed a heroin habit. They split up when he beat Mary up so badly that she was briefly hospitalised. She then approached the local authority for help and was placed in a homeless hostel, after completing a residential rehabilitation programme for heroin addiction. She is currently 'clean', but says it is very difficult to avoid using again when "surrounded by users" in the hostel.

Though Mary has never been to prison, she has been convicted of shoplifting several times, which she says she did to support her drug habit and that of her ex-boyfriend. She has a history of self harm and has attempted suicide at least one. She is still afraid of her ex-boyfriend, though he hasn't tried to contact her for a while.

2. John

John is 44. He had a fairly stable upbringing, though his family didn't have much money. John worked as a painter and decorator after he left school but by his late 20s he had developed a serious alcohol problem, split up from his long-term girlfriend and lost various jobs. John has been involved with a community rehabilitation programme in the past but is currently drinking quite heavily on a daily basis. He has a 10 year old son from a short-lived relationship whom he rarely sees.

John was evicted from his social tenancy for rent arrears, slept rough for a few months and then moved into a hostel where he has been for more than a year. He spends a lot of his time drinking in a public park as part of an established 'street drinking school'. He has served a prison sentence for assaulting his ex-girlfriend.

3. Michael

Michael, aged 34, has been sleeping rough "off and on" for nine years. He started smoking cannabis and binge drinking when he was 14 and has been injecting heroin since he was 21. He begs on a daily basis to fund his habit.

Michael has only recently moved to this city/town/area from another part of Scotland. His health is poor: he suffers from Hepatitis C and has bad abscesses on his legs resulting from intravenous needle use. Michael was a serial school truant, has no qualifications and has never had paid employment. Some of the workers he has been in contact with suspect he may have mild learning disabilities but there's been no formal assessment.

Prompts

- Do you come across cases like Mary/John/Michael's very often? Anything that is typically different/additional issues that tend to be present?
- Which services are Mary/John/Michael likely to be in contact with? - Housing Options/Homelessness, addictions services, social work (including criminal justice SW), health services (including MH), DV services, housing support workers, (other) third sector services/agencies? What, if any, links are made with children's services?
- Which, if any, of these service would take the lead? How would that be determined? [*n.b. probe on the importance of 'first door walked through'/timing of approach*]
- Would there be any overarching case management/coordination? What form would that take? Who would be responsible for this? Has it changed in the light of health and social care integration?
- What would be the key assessment processes? Who would take responsibility for this? What types of information would be sought via these processes*?[n.b. probe on whether future hopes/plans are part of this]*
    - In the case of Michael who recently moved from another part of Scotland, what information about him, if any, would be retrieved from support organisations that used to support him in the location where he used to reside? Would previous support plan for Michael be continued or otherwise taken into account in the current location?
- What would be the key intervention priorities/actions taken? How would these be determined *[n.b probe on whether service user plays a role in shaping these decisions, and if so how]*? What if Mary/John/Michael disagreed with those actions/priorities?
- What, in your experience, would be the priorities of people like Mary/John/Michael? Could those be accommodated or is it very difficult/not appropriate?

- What sort of help would they be receiving from these services - help with housing, employment/education/training/purposeful activity, MH, physical health, DV, family/child contact, other social relationships, social activities/engagement, etc.
- How would the multiplicity of support needs be managed? Do different services sometimes have distinct/conflicting priorities/approaches? How is this managed - ie is there evidence of partnerships/protocols?
- How long would they receive these forms of help? In what circumstances would they be withdrawn? What would happen after that?
- What if they rejected this assistance? What if they were hostile or aggressive at any point? What would happen then?
- Anything that works particularly well locally in cases like Mary/John/Michael's?
- Anything that works badly/ gaps/problems etc.?
- Do staff feel confident/well supported in dealing with these cases? Are peer forms of support used at all?
- We have talked a lot about what *would* happen in these cases, what do you think *should* happen? How do we make that happen? What are the barriers/opportunities?

Concluding discussion

- Anything else on working with people with complex needs in X locality that we haven't covered/should discuss? Are there other key groups with complex needs that we should be considering in this study?

APPENDIX E

TEMPLATE - CASE STUDY REPORTS

ITEM	***NOTES***
1) Description of LA area	From KI interviews + local documents and data • urban/rural/large towns • east/west - north/south • deprived/wealthy • economic basis/history
2) Methods	Summarise fieldwork undertaken • number of KIs/their position • number and broad composition of FGs • number/profile of SUs
3) Description of SMD population	From KI interviews/FGs + local documents and data • scale • profile/characteristics • trends • nature/overlap of needs - homelessness, MH, CJ, addictions, poverty, DV, etc.
4) Description of SMD service network	From KI interviews/FGs + local documents and data • Local strategic frameworks/governance structures/key policies • Key partners/services - brief description of who they are, what they do, their scale/capacity • Case management/coordination arrangements • Assessment processes • Any other relevant facts
5) Evaluation of SMD service network (service provider perspectives)	From KI interviews/FG discussions summarise (and evidence with quotes): • strengths/weaknesses • gaps/unmet needs • access/resource issues • points of conflict/tension between services

	• degree of assertiveness/stickability of services • appropriateness of individual service design/delivery • effectiveness of coordination arrangements (at strategic and case level) • services/systems change needed locally • services/systems change needed nationally
6) Service user experiences (frontline provider perspectives)	From FG vignette analysis: • summarise (and evidence with quotes) reactions to each of the three vignettes in turn • draw out key points on all of the prompts (and note areas where no evidence generated) • draw out similarities/differences in perspectives of workers from different types of services/sectors • where more than one FG, fine to either integrate data across them or present separately
7) Service user experiences (their own perspectives)	Draw from across the SU interviews, key points and quotes on: • Common childhood experiences/routes in to SMD • Experience of each of the individual key services (both positive and negative) ➢ LA homelessness services; ➢ voluntary sector homelessness services; ➢ landlords/housing support workers ➢ addictions; ➢ MH; ➢ other healthcare; ➢ prison/CJ; ➢ DV services;

	➢ social work services; ➢ Benefits system/SWF ➢ foodbanks/other charities (if comes up) • View on the strengths/weaknesses of the overall 'system', coordination, complexity, etc. • Any missed opportunities for prevention • Priorities for systems change • Personal priorities
8) Any other key points	• Additional relevant points not covered above • Draw out any key similarities/differences in perspective between the different stakeholders

APPENDIX F

Hard Edges Scotland
National Key Informant Topic Guide

- Study is about SMD *defined* as – (homeless/ substance/ criminal justice/ mental health/DV). Does that sound right combination of key factors? Anything else you would include? Anything you would exclude?
- What do you think *causes* SMD?
- *Who* is most affected by SMD (socio-economic, demographic, h/h types, area, background characteristics/experiences, childhood factors, etc.)
- What are the most important *solutions* to SMD?
- What *data* exists on/key sources on: a) scale; b) overlap; c) trends; d) quality of life, e) costs. How do we access? Possibilities for data linkage? What sort of data is missing/that we need? What could it be used for?
- Any specific differences between *England/Scotland* you'd expect us to find in profile/causes/experiences/outcomes?
- Differences in *different parts of Scotland* - urban/rural/small town
- Any major policy changes we should be aware of? Any specific policy changes required?
- What *service systems* do people experiencing SMD come into contact with? What sort of systems change is needed to improve outcomes/experiences? How do these systems differ across Scotland? Some places better than others?
- What are the upstream opportunities for *early intervention/prevention?* What are key missed opportunities? What sort of preventative interventions likely to be most effective?
- Advice on where we should *cluster in-depth interviews* to get a good representation across Scotland?
- Advice on *other KI interviews*?
- *Further help* they can offer (e.g. on data, costs info, literature/policy docs, access to service users for in-depth interviews, helping to disseminate findings etc)
- Emphasise cross-sectoral 'ownership' that we are aiming for. Hope they wish to stay involved/updated etc.