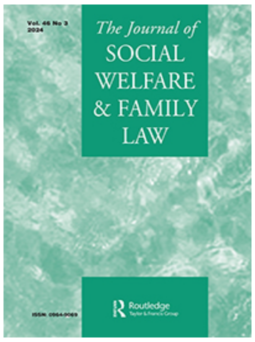

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A public health approach to family justice: the possibilities of legal epidemiology and administrative data

Matthew A Jay

UCL Legal Epidemiology Group, UCL Great Ormond Street Institute of Child Health, London, UK

ABSTRACT

Those in family court proceedings are at the sharp end of a spectrum of disputes concerning their children's upbringing. Emerging evidence shows that, regarding both public and private law, socioeconomic and health deprivation of various forms is associated with higher rates of proceedings. Discovering health and social determinants of proceedings could inform upstream interventions to support parenting, improve wellbeing, reduce conflict and adversity and prevent the need for court involvement in the first place. It could also inform measures to mitigate the adverse health effects of legal processes on vulnerable families and debates on legal aid and alternative dispute resolution in private proceedings. This 'public health' approach to family justice is now possible by innovations in linking whole-population, routinely collected datasets between the courts, healthcare and other services. This article explores the possibilities of combining legal and epidemiological understandings, methods and skills in researching family justice to inform practice, policy and legislative reform.

KEYWORDS

Legal epidemiology; administrative data; family law; empirical legal research; socio-legal research

Introduction

Family courts hear cases relating to children's upbringing and welfare – cases arising at complex intersections of parental health, adversity, abuse and maltreatment and capacity (Wilkinson and Bowyer 2017, Thomas 2018, Bywaters *et al.* 2020, Griffiths *et al.* 2020, Johnson *et al.* 2022, Pearson *et al.* 2022). Public proceedings (around 25,000 children per year in England (Thomas 2018, Cafcass 2023)) are brought by local authorities in cases of child maltreatment aiming to place the child under local authority care or supervision. Private proceedings (about 60,000 children per year (Cusworth *et al.* 2021, Cafcass 2023)) concern matters such as living arrangements following relationship breakdown, primarily under the Children Act 1989, s 8. These, too, involve overlapping problems including allegations of domestic abuse in 40% to 60% of cases (Barnett 2020), child maltreatment and welfare concern in so-called cross-over cases (Bainham 2013, Jay *et al.* 2019) and socioeconomic deprivation (Cusworth *et al.* 2021, 2021).

CONTACT Matthew A Jay matthew.jay@ucl.ac.uk

This article has been corrected with minor changes. These changes do not impact the academic content of the article.

Emerging empirical evidence shows poor existing parental health is associated with higher rates of proceedings (Kaspiew *et al.* 2015, Griffiths *et al.* 2020, Cusworth *et al.* 2021, 2021, Johnson *et al.* 2022, Pearson *et al.* 2022). Focussing on parents, as well as children, is necessary given provisions in the Children Act 1989 (s 34 and Schedule 2, paragraph 15) that children will continue to have reasonable parental contact (Department for Education 2021). Further, of all children in care, in recent years, between 6% and 7% are placed with parents as part of their care plan[1] and around a quarter are reunited with them when they leave care (Department for Education 2023b). There is also a high rate of return-to-court in public and private proceedings (Broadhurst *et al.* 2017, Halliday *et al.* 2017, Jay *et al.* 2019). In other words, parents remain involved with their children, or future children, after the initial involvement of children's social care services and after court proceedings. However, little is known on upstream determinants of proceedings – what factors predict court involvement – or how they vary across areas (Bywaters 2017, Thomas 2018, Wijedasa *et al.* 2018, Bywaters *et al.* 2020, Pearson *et al.* 2020, Barnett 2020).

A new 'public health' approach to law, which calls for transdisciplinary integration of law, social science, epidemiology and administrative data in a new discipline of legal epidemiology, is necessary and now possible to better understand how family justice operates, who uses it, and the short- and long-term outcomes of it. Discovering upstream health and social determinants of family proceedings could inform early interventions to support parenting, improve child and family health, reduce conflict and adversity and prevent the need for court involvement in the first place. Such work could also inform whether court processes are harmful to parent and child health. Legal aid, for example, was abolished for most private law proceedings in 2013 on the belief that private matters do not merit state intervention, without acknowledging the health needs of families (Ministry of Justice 2010, 2023). Consequently, many parents undergo private proceedings without legal representation, which may be harmful due to the stresses of court processes, facing abusive partners in court and the consequences of inappropriate court decisions (Hunter *et al.* 2020).

The urgency of adopting a public health approach to evaluating law was highlighted by the Academy of Medical Sciences' Health of the Public By 2040 report, which, recognising the need to evaluate the effectiveness of legislation, noted that more funding is needed for law and health-related social sciences (Academy of Medical Sciences 2016). Investments in administrative data in countries such as the UK, however, mean a public health approach to family justice is now possible (Jay *et al.* 2017, Broadhurst *et al.* 2021, Ministry of Justice 2022, ADRUK 2023). These include Ministry of Justice (MoJ) family court data, data from the Children and Family Court Advisory and Support Service (Cafcass) (Bedston *et al.* 2020, Johnson *et al.* 2020), and data from hospitals and other health settings across England and Wales (Jay *et al.* 2017). By making use of such datasets, which have significant advantages over traditional research designs in the family justice space, it is now possible to carry out whole population analyses of those involved in the family justice system.

The paper is organised as follows. The emergence of a new field of legal epidemiology, including issues around analytical capacity, is first discussed before possible data sources and the challenges in using them are laid out. Close collaboration among disciplines including law, epidemiology, data science and social work is called for to realise the potential of empirical work in this area. Illustrative examples of work using linked data in the fields of family justice and children's social care are presented before discussion of the potential impacts that a public health approach could have on the family justice system.

Epidemiology and legal epidemiology

Epidemiology is the study of the distribution and determinants of health-related events, states and processes in specified populations (Lash *et al.* 2020). At the risk of over-simplification, it is the study of who gets disease, when, where and why. Due to historical circumstances, epidemiology's roots lie in combating infectious disease,[2] though it is now applied to a range of health and health-related outcomes including non-infectious acute and chronic conditions, mortality, health-related behaviours, general well-being and many others. Epidemiological studies involve descriptions of disease prevalence (how many with disease at a point in time) and incidence (how many new cases over a given period) in populations as well as analysis of possible risk factors and putative causal agents of disease. Through careful analysis of covariables such as confounders, mediators and effect modifiers, epidemiologists seek to explain the causes of disease with a view to disease prevention and mitigation. In doing so, they must carefully define and study the risk factors and exposures (putative causal factors) including how these are distributed among the population. Evidence from epidemiological investigations can be put to a range of uses, including in disease monitoring, clinical practice, the design and implementation of interventions and policy making. While epidemiology's toolbox is primarily quantitative, it is recognised that quantitative designs ought to be conducted alongside qualitative approaches as each provides different kinds of information. Indeed, mixed-methods approaches are increasingly common and there are increasing expectations among research funders that investigators involve patient and public groups in research, with options ranging from consultation on study design and interpretation through to full co-production of research (National Institute of Health and Care Research 2019).

Several branches of epidemiology have evolved to meet specific goals, though any epidemiologist will likely be using elements of any number of these subfields, such as when examining how early life deprivation affects disease risk in later life (Lash *et al.* 2020). Examples include infectious disease epidemiology, life course epidemiology (Kuh *et al.* 2003) and, most pertinent to our discussion, social epidemiology (Berkman *et al.* 2014). The focus of social epidemiology is how social factors, from the micro-social factors of peer and family relationships to the macro-social factors of how we organise society, affect health. The field is influenced by a range of disciplines, including sociology, psychology and biology. Among other things, social epidemiology has been hugely influential in showing how socioeconomic position – the relative position that one holds in society in terms of factors such as income, wealth, education, peer networks and occupational class – is strongly determinative of health. The Whitehall studies, for example, followed a cohort of British civil servants, who have relatively stable employment but who are organised in a structured hierarchy (Marmot *et al.* 1991). The studies showed that civil servants of lower pay grades had more heart and lung problems than those of higher pay grades, with a clear gradient between the two (the 'social gradient in health' being one of the core concepts in social epidemiology). In other words, it is not simply a matter of extremes of poverty that result in worse health for a few, but inequality across society adversely affecting the health of all. While the precise mechanisms of such relationships are complex (Diderichsen *et al.* 2018) and have been much debated, it is certainly the case that poorer health, measured using a vast array of measures of health, is associated with lower socioeconomic position, also measured using many different indicators such as education, income and employment grade (Marmot *et al.* 2010, Berkman *et al.* 2014).

While none would deny that law is a significant macro-level social factor, surprisingly little attention to date has been paid by epidemiologists to law, including not only black-letter law in the books but also law and legal processes as enacted in the world by a range of actors including judges, lawyers, public bodies and private individuals (Burris *et al.* 2002, 2020, Jay *et al.* 2017, 2018, Genn 2019, Jay 2020). This is despite the fact that legal issues are deeply embedded within the social determinants of health (Genn 2019). Issues such as income, housing, employment and education – some of the strongest determinants of health – are underpinned by services, through lawyers or otherwise, operating under a complex web of legislation. While law is rarely included in theoretical diagrams representing the social determinants of health,[3] it is obvious that law and its implementation through legal processes should be prime targets for epidemiological investigation to understand how law impacts on public health and *vice versa* (Burris *et al.* 2002, 2010, 2016, 2020, Jay *et al.* 2017, Jay 2020).

It is worth considering why the development of legal epidemiology has not occurred until very recently, particularly given that epidemiological study of law has clear roots within social epidemiology and clearly speaks to the socio-legal studies and empirical legal studies movements. As social epidemiology is also influenced by sociology, legal epidemiology would also be at home with the sociology of law. Without proposing a definite answer, it is suggested that scientific evaluation of law has been rendered difficult by the dominance of doctrinal legal education, which focuses on rules rather than evaluation of 'law in the real world' and by epidemiology's failure to embrace legal processes as health-related interventions or outcomes (Genn *et al.* 2006, Jay *et al.* 2018, Jay 2020, Burris *et al.* 2020). The black-letter approach to law still dominates legal education (at least in the UK) with lawyers and legal academics receiving limited or no empirical training. As the Nuffield Inquiry on Empirical Legal Research found, lawyers who do carry out empirical work have come to do so through circuitous, haphazard routes. The result is that there is currently a lack of capacity to undertake empirical work within law (Genn *et al.* 2006). While the Nuffield Inquiry report was published in 2006, the situation has little changed, especially within family law, with the Nuffield Family Justice Observatory scoping studies making the same observations in 2017 (Jay *et al.* 2017, Broadhurst *et al.* 2018). At the same time, epidemiological education involves no legal instruction such that even the sources of law are generally not well understood by epidemiologists. Given also that law departments are rarely, if ever, organised alongside departments that conduct epidemiological research, it is arguably not surprising that these two silos have so far struggled to integrate and cross-fertilise their fields of inquiry. Given the complexities of both law and epidemiology (and, as outlined below, data sources), a possible way forward is through cross-disciplinary collaboration in new legal epidemiology teams that involve research co-produced by lawyers, epidemiologists and others.

Applications of legal epidemiology

Recent developments and studies demonstrate the application and possibilities of legal epidemiology within UK family law.[4] The focus here is on quantitative studies using administrative data given the difficulties associated with traditional quantitative research designs (such as consented surveys), illustrated below. However, this is not to say that administrative data are inherently better than traditional designs or that quantitative designs are superior to qualitative: each is different and provides a different kind of information and each has its own limitations.

Data for epidemiological (and other) studies, broadly speaking, can come from three main sources: *de novo* data collection, existing research resources and administrative data.[5] *De novo* data collection involves investigators collecting their own data from scratch. While this gives researchers complete control, in theory if not in practice, over every element of the study, including target population, sampling strategy, data collection tools and so on, it also requires very significant financial and time investment. It will also be unfeasible with normal funding for some questions, such as where disease manifestation occurs over the course of decades.

Fortunately, the UK is host to a range of existing research resources. Examples include the British birth cohorts, which began in 1946, 1958, 1970 and 2000, as well as regional studies such as the Avon Longitudinal Study of Parents and Children (ALSPAC) and Born in Bradford (Jay *et al.* 2017, UK Research and Innovation 2023). These studies typically recruit cohorts of thousands of participants born in their inception years (or at other points of life), and follow them up for significant periods of time, often to the present day. They provide very rich data on a host of factors across life that are of interest to researchers from a range of disciplines, such as (to pick just one legally relevant example) on the relationship between a child's early life relationship with their mother and criminal behaviour in adolescence (Stevens 2018). Because participants have consented, accessing the anonymised data is relatively quick and straightforward, and because the studies contain large sample sizes (e.g. ranging from around 5,000 to 20,000 in the British birth cohorts), they have sufficient statistical power to examine even relatively rare exposures and outcomes.

These studies, however, just like studies using *de novo* data collection, are susceptible to selection and attrition bias. These are biases that arise due to systematic differences in the likelihood of groups of people agreeing to take part and remain in a study. It is well known, for example, that people living in more deprived socioeconomic circumstances are less likely to take part in research in the first place and are more likely to leave studies later on (Howe *et al.* 2013). This can skew observed relationships in the data and, if particularly severe, can result in too few participants to be able to draw meaningful conclusions.

To highlight how problematic attrition can be in the family justice space, consider the study by Teyhan *et al.* (2019).[6] The ALSPAC study team had linked ALSPAC data to participants' children's social care and education records, with the aim of investigating links between childhood adversity and educational outcomes. One of the key findings of Teyhan *et al.* (2019) related to the attrition rate among children who had been recognised as children in need under the Children Act, s 17, and those who had been looked after on a care order or under s 20 during Key Stage 4 (Teyhan *et al.* 2019). Of the 10,000 participants included in their analysis, fewer than 40% of those with a child in need record remained in the study at 12 years of age, as did 20% of those who had a record of being looked after. This compared to about 60% in the participants without such records. The fact that such a high proportion of participants with social care records left the study gives rise to serious concerns about biased results as those who remain in the study are likely to differ systematically from whose who dropped out (e.g. their experiences might not have been as 'severe' as those who did leave the study). In addition to attrition, numbers of those with known social care involvement in Teyhan *et al*'s (2019) study were small. Of the 10,000 participants, only around 100 had a record of being a child looked after and 170 had a record of being a child in need.[7] Such numbers are often too small for population-level analyses, particularly where outcomes such as disease frequency, are rare.

Because of such considerations, there is significant interest in using administrative data for family justice research (Jay *et al.* 2017, 2018, Jay 2020, Broadhurst *et al.* 2021, Justice 2022, ADRUK 2023). Administrative data are data collected routinely by public services to support daily operations. For example, all hospitals must collect data on their patients and must do so, at least for a core dataset, in a standardised way that is used by central government for planning and remuneration as part of the Hospital Episode Statistics (Herbert *et al.* 2017, NHS Digital 2023). The Ministry of Justice and, separately, Cafcass, likewise, collect routine data from the family courts (Jay *et al.* 2017, 2019, Bedston *et al.* 2020, Johnson *et al.* 2020). Similarly, all schools and social care departments return data to the Department for Education, which are collated in the National Pupil Database (Mc Grath-Lone *et al.* 2016, Jay *et al.* 2019, Emmott *et al.* 2019).

Administrative data from universal services have whole-population, or near-whole-population, coverage and capture all contacts between individuals and the service. As data are generated to support service operation, they are often of immediate relevance to those services. Additionally, as different datasets typically contain the same sets of demographic variables (name, address, date of birth), datasets can be linked together for cross-sectoral analyses. These properties of administrative data make them particularly attractive to researchers, enabling them to overcome some of the primary limitations of consented studies. However, administrative data are not collected for research purposes. Datasets may not contain sufficient information, or information in sufficient detail, for a given research project, and there may be issues around data quality and variation in data quality brought about by factors such as variation over time and space in definitions used, practices for data entry and methods to control missing data. The datasets can also be affected by changes in practice and coding that are not controllable by researchers. Nor are selection and attrition biases eliminated altogether, especially when linking datasets where biases in data quality (such as the accuracy in recording of names across ethnic groups) can affect analyses. For these reasons, researchers must carefully assess data quality through statistical means and through engagement with data providers and staff on the front line of services who are actually entering the data. If done carefully, however, administrative datasets can yield powerful insights that would not otherwise by possible.

Another limitation of using administrative data is cost and difficulty of data access. Negotiating data access is a complex task that can take years, itself requiring expertise (Downs *et al.* 2017). Legislation enables data sharing for research, and for doing so without requiring individual consent, provided strict governance requirements are met. Strict governance requirements are especially necessary when data linkage is required because identifiable data must flow out from one organisation to another for linkage (researchers typically only access de-identified data, using an anonymised key to differentiate between people's records). Necessary information security standards are therefore high.[8] Once access to data is granted, the datasets are not typically research-ready and require very significant data processing using advanced coding and data management techniques, sometimes in the absence of any kind of data dictionary or meta-data (Mc Grath-Lone *et al.* 2022). These factors make the barrier to entry higher than for other types of data, further highlighting the need for collaboration across disciplines to realise the potential of such data sources.

Examples of work using administrative data will demonstrate their value,[9] starting with work on the cumulative incidence of social care provision. Official Department of Education figures show that around 0.7% of children in England are currently looked after (Department for Education 2023b). This is around 80,000 children or one child in every 140. Taking these figures at face value, it would appear that only a tiny fragment of the population experience periods of time in state care. However, Mc Grath-Lone *et al.* (Mc Grath-Lone *et al.* 2016) examined the cumulative incidence: instead of asking how many children are currently in care, they used the children looked after return to investigate how many children are *ever* in care at least once before turning 18. The answer, for children born between 1992 and 1994 was 3.3%, rising with later birth cohorts.[10] More striking are comparisons between the percentage of children currently recorded as being in need under section 17, standing at around 3% to 4% depending on year (Department for Education 2023a), and the cumulative estimate of 25% before turning 18 (Jay *et al.* 2023). In other words, using the child in need census, it is estimated that at least a quarter of all children would be referred to social care, assessed and found to be in need at least once before turning 18, far higher than the 3% to 4% children in need at any given time point. Understanding that the extent to which the population may need social care services is significantly higher than the official statistics suggest ought to shift debates around the place of social care services and whether the needs that they are designed to meet can be better met by upstream prevention, which may itself require policy or legislative reform and adequate resourcing of universal services.

An example from the family courts is the evaluation of the extent to which children who appear in private family proceedings re-appear later in private proceedings and/or appear in subsequent public proceedings. The motivation for investigating this lay in the fact that recurrence is a known phenomenon in both public and private proceedings and potentially represents a failure to resolve disputes satisfactorily the first time.[11] Secondly, the phenomenon of so-called cross-over cases has been well-known for a long time (Bainham 2013). These are private proceedings brought by an individual under the Children Act 1989, s 8, but which either are being driven by the local authority within the context of child protection or during which child protection concerns arise. They are in essence therefore either public proceedings in disguise or have significant overlap with the public system.

It was possible to take advantage of the Ministry of Justice's Children in Family Justice Datashare, which included around 50,000 to 60,000 children each year between 2011 and 2016 who were involved in private proceedings (Jay *et al.* 2019). Among other things, it was found, firstly, that there were markers of child welfare concern in around half of all private proceedings. This is not surprising given estimates of domestic abuse allegations in 40% to 60% of private proceedings (Hunter *et al.* 2020). It was also found that 3.4% of children involved in private proceedings in 2011 appeared later in public proceedings within four years.[12] Given that the lifetime cumulative incidence of entering care is around 3.3% (Mc Grath-Lone *et al.* 2016), which includes following court proceedings and section 20, the fact that entry into care proceedings (i.e. ignoring section 20) stood at 3.4% in just four years represents a significantly higher risk of welfare need, potential maltreatment and state intervention among those involved in private proceedings compared to the general population.

A high level of welfare need in private proceedings should inform debates on legal aid, access to justice and alternative dispute resolution. Legal aid was abolished for most private family law proceedings in 2013 on the belief that private matters do not merit state intervention, without acknowledging the health needs of families (Ministry of Justice 2010, 2023). Studying the health of parents involved in private proceedings will provide crucial insights on this and whether such and other reforms are equitable on a population level. A research example using data from Cafcass public law proceedings linked to mental health services data for four south London boroughs (the South London and Maudsley NHS Foundation Trust) illustrates how using linked health and court data can show how much support families experiencing court proceedings may need (Pearson *et al.* 2022). This study showed very high levels of mental health service use (implying high levels of mental health problems) among mothers appearing in court, far higher than among mothers not involved in court. Pearson *et al.* (2022) found that, of the 3,000 mothers involved in care proceedings in South London between 2007 and 2019, 66% were known to mental health services at some point. Of these, 80% were known to these services before their court proceedings. Where mothers involved in public proceedings were known to mental health services, 54% had a mental health diagnosis recorded, which included severe conditions such as schizophrenia, acute psychosis, personality disorders, anxiety and depression and others, and 22% had records of substance misuse. These findings were limited to mothers involved in s 31 applications, though emerging findings are showing that there is also elevated mental health need among those in private proceedings (Kaspiew *et al.* 2015, Cusworth *et al.* 2021, 2021). It is therefore clear that a much better understanding of the health of parents and children involved in proceedings is needed if reforms to legal aid and access to justice are to be equitable and to ensure that court processes themselves are suited to the needs of litigants and not harmful to them (Hunter *et al.* 2020).

A note on different uses of administrative data

Before turning to consider the potential impacts of a public health approach to family justice, it is worth considering at this stage different uses of administrative data. The focus of this paper is on using data on groups of individuals and concerns exposures and outcomes at a group or population level, for example by examining rates or averages. While such work is useful for making predictions about groups of people and intervening to reduce harms and improve outcomes for groups as a whole, it does not provide predictions for specific individuals. There is interest, for example, in risk prediction around offending and re-offending (Fazel *et al.* 2012) or using screening tools in attempts to detect domestic abuse (Woodman *et al.* 2010). Practitioners in accident and emergency departments may, for example, use information they know about an individual alongside a checklist or decision-making algorithm, which may include reference to data held by other agencies, to determine whether a patient is at higher risk of abuse (Woodman *et al.* 2010). This is a very different use of data compared to using anonymised data for research, which raises its own ethical considerations due to the identifiability of the data. Additionally, while research has shown that the public is broadly supportive of using administrative data for research, this is not unconditional and attitudes may vary according to who is using data and for what purpose (Office for National Statistics 2023). Using data combined with risk assessment metrics also raises its own scientific questions. Risk assessment tools, for example, may not be valid or reliable, or may be more or less valid and reliable for different groups and in different settings, and could cause more harm than good through false positives (triggering unnecessary investigations or interventions) and false negatives (missing people who could benefit) (Woodman *et al.* 2010, Fazel *et al.* 2012). The validity and reliability of decision tools can and should be subject to scientific scrutiny alongside ensuring the use of data supporting them is ethical and in the public benefit.

Potential impacts on family justice

The purpose of legal epidemiology (and other empirical investigations of law) is not simply to describe how law is operating, though that is a necessary step. It is the application of the knowledge derived from the kinds of studies described above that is crucial in that it is this knowledge that has transformative potential across and beyond the family justice system. By implementing public health approaches to family justice, demand can be reduced by addressing the upstream factors that lead to legal intervention. Not only would such primary and secondary prevention[13] reduce demand on the system, it would do so by improving the lives of children and families across the country – a worthwhile end in its own right, and one that has consequences for other services such as healthcare, education and social care.

In addition to preventing problems arising or escalating in the first place, a public health approach also offers tertiary prevention: in the present context, mitigating harms and improving outcomes when people do need and use the courts. For example, evidence as to the physical and mental health burden among parents, children and other family members using the family courts ought to draw attention to the processes of litigation and the manner in which decisions are made in the family courts. In short, do court processes serve the needs of litigants and ensure that they are able to navigate the court system and give effect to their rights? Should alternatives, such as the Family Drug and Alcohol Court, be considered as new models for private family justice? This is especially so regarding litigants in person and here, too, is another area where legal epidemiological evidence ought to improve policy and legislation. An understanding of the health and social needs of families in the family court, based on evidence and not anecdote, could inform debates on legal aid and access to justice, including around expansion of non-court-based mediation. The emerging evidence as discussed in this paper is painting a picture of a significant group of court users with high levels of need not only in public but also private cases (Kaspiew *et al.* 2015, Jay *et al.* 2019, Griffiths *et al.* 2020, 2022, Cusworth *et al.* 2021, 2021). Inappropriate processes and decisions in these cases may lead to adverse consequences for those individuals, such as impacts on their mental and physical health and well-being, which in turn have further impacts on other services (health, social care, schools) and on the courts later on, with litigants returning with more difficulties and more distress.

Finally, a public health approach forces consideration of what happens after court. Families do not leave their problems at the courtroom, nor do court decisions solve the deeply rooted clusters of problems that many families facing multiple adversities experience. The fact that so many return to both public and private family courts underscores this (Broadhurst *et al.* 2015, 2017, Halliday *et al.* 2017, Jay *et al.* 2019, Bedston *et al.* 2019). Public health and epidemiological strategies are tools that can be used to monitor at a population level what happens to court users across the life course with a view to ensuring that, whatever stage their problem reaches, help can be given.

At this point, it is worth emphasising that adopting a public health approach does not imply denying people their right to access the courts. A public health approach does not mean that those with disputes must ‘try something else’ first. Instead, it is a way of preventing situations that require legal intervention from arising in the first place or a way to prevent them from escalating to a point where courts are needed. As Rose *et al.* (2008) put it:

> It is better to be healthy than ill or dead. That is the beginning and the end of the only real argument for preventive medicine. It is sufficient. (Rose *et al.* 2008)

So, too, with law. In an ideal world, neither hospitals nor courts, neither doctors nor lawyers, would be needed. But when court is required, a public health approach would also inform what those court processes should be to minimise harms and promote positive outcomes in accordance with law. If anything, such an approach would itself promote rights, not run contrary to them.

Conclusion

The family justice and social care systems are vastly complex, constituted by actors with different experiences, expectations, goals, resources and interests (Green 2021). They do not operate in a vacuum: what happens elsewhere in society affects how they run, who needs them, who actually accesses them and what happens after cases conlucde and social workers close their files. Given the potentially life-changing consequences that can result from the actions of these systems, the need to study and understand how they operate, and how they can be improved, is imperative. By cross-disciplinary collaboration and integration of legal, epidemiological, data science and social work ways of thinking, along with taking advantage of recent investments and developments in linking administrative datasets together, it is now possible to meet this challenge. This is not an academic exercise. Adopting a public health approach to law, underpinned by scientific evidence, has the potential to improve the lives of countless families by addressing the root causes of the need for litigation, and addressing problems that arise and are caused by the processes of litigation itself. If the need for court in the first place can be prevented, and outcomes of legal action improved, then not only do those families stand to benefit, but so too does the family justice system and other services that those families would have needed.

Notes

1. As Masson discusses, recent case law (*Re JW (Child at Home under a Care Order)* [2023] EWCA Civ 944) might lead to a reduction in the use of care orders with placement at home, with a rise of supervision orders or use of section 20 instead (Masson 2023). Either way, the parents will continue to be involved with their children's lives.
2. Perhaps the earliest use of the word epidemiology is in the 1598 treatise written in Latin and partly in Spanish by the Italian physician Quinctus Tyberius Angelerius (Quinto Tiberio Angelerio) on the 1582–1583 plague epidemic on Sardinia (Angelerius 1598) (For a discussion, see Bianucci *et al.* 2013). The word 'epidemiology' is interesting etymologically and seems to have caused lexicographers some difficulty. It derives from the ancient Greek *ἐπιδήμιος* (*epidēmios*), an adjective meaning simply 'among the people', which in a disease context leads us to the meaning of 'epidemic disease', an idea first coined by Hippocrates in the sense of a disease visited upon the population. *Ἐπιδήμιος* is combined with the suffix-logy (also from the Greek) to give us the nouns *epidemiologia* in Latin, *epidemiología* in Spanish and epidemiology in English. Nowhere in the word itself do the diseases that are being studied appear! In terms of English usage, the *Oxford English Dictionary's* entry for Epidemiology, the earliest citation in which dates to 1850, is surprisingly unhelpful in that its quotations are not terribly illustrative of how the word epidemiology has been used throughout history. The 1850 entry in fact refers to 'Rudolf Haas M.D., late lecturer on epidemiology in Vienna'. Given this is a job title, it would be surprising if the term were not used before then. 'Epidemick' and 'Epidemical' (but not epidemiology) appear in Dr Johnson's (1755) dictionary as meaning 'That which falls at once upon great numbers of people, as a plague', 'Generally prevailing; affecting great numbers' and 'General; universal' (the lattermost receiving a warning that it is 'not used; not proper' by the 1773 edition (Johnson 1755 & 1773)). 'Endemial', 'endemick' and 'endemical' likewise appear, though under the headword 'Invasion', Johnson appears to confuse epidemic with endemic. The 2016 *Dictionary of Epidemiology* (Porta (ed.), 2016) provides a wealth of definitions of various types of epidemiology, but is, sadly, not an historical source. The current *Diccionario de la lengua española* of the Real Academia Española, also not an historical dictionary, contains the sole, and surprising, definition: '*Tratado de las epidemias* [treatise on epidemics]', a definition not much improved on by the Fundación BBVA's *Diccionario del español actual*: '*Estudio de las epidemias* [study of epidemics]'.
3. Take, for example, the hugely influential 1991 Dahlgreen and Whitehead Rainbow Model, which makes reference to, at the lowest level, age, sex and constitutional factors (e.g. genetics), then individual lifestyle factors and social and community networks, up to a range of living and working conditions including education, unemployment, water and sanitation, health care services and housing and then general socio-economic, cultural and environmental conditions at the highest level. Nowhere does law feature (Dahlgren and Whitehead 2021).
4. Considerations may vary in other areas of law and in other jurisdictions. Criminology, for example, is a well-established discipline with a long history of empirical research. Additionally, the manner in which empirical work can be applied may vary in other areas of law.
5. Without seeking to construct a taxonomy of data sources, other candidates for inclusion in such a list are disease registries, the decennial Census, birth and death registrations and private health insurance claims (especially in countries such as the USA), though the extent to which such data sources are just particular examples of research resources or administrative data is debatable.
6. This is not to criticise Teyhan *et al.* (2019) or the ALSPAC study team. Teyhan *et al*'.s example is used because they, as is good practice, present the attrition data clearly in their paper. This is an issue that affects all such studies to some degree or another.
7. Because of limitations in data availability, these numbers represent only a small fraction of the number of children *ever* in need or *ever* looked after across childhood in ALSPAC.

8. It is beyond the scope of this article to fully consider the security implications of administrative data and their linkage. Those wishing to gain access to data must follow the Five Safes framework (UK Data Service n.d.) and satisfy data owners of institutional capacity including around technical and physical security. Data are only shared under licence for a limited time and for a specified purpose, which must be in the public interest. Increasingly, data are stored in Trusted Research Environments, such as the Office of National Statistics Secure Research Service, such that data do not even flow to the researchers' institutions. Datasets such as those from healthcare services and courts contain highly sensitive information and therefore must be subject to high security standards. Unfortunately, no system is hacker proof and the consequences of data breaches could be severe. Risks are potentially heightened when linking sensitive datasets together. There are also debates around the use of consistent identifiers, such as a consistent identifier for children across education and social care (Department for Education 2016, Royal College of Paediatric and Child Health n.d.). From a public health research perspective, this would facilitate (though is not necessarily essential to) data linkage (Jay *et al.* 2017, Allnatt *et al.* 2022), but may give rise to particular privacy concerns.
9. For those interested, further examples can be found on the UCL Legal Epidemiology Group website: https://www.ucl.ac.uk/child-health/research/population-policy-and-practice-research-and-teaching-department/cenb-clinical-5.
10. A limitation of cumulative estimates based on birth cohorts is that later cohorts may experience different risk. These estimates are currently being updated.
11. This, of course, is not always the case but it was not possible to investigate this in the study.
12. It was not possible to examine the outcomes of these applications or estimate the percentage of children who became looked after under section 20 over the same period.
13. Primary prevention refers to preventing a problem arising in the first place (in a medical context, immunisation against infectious diseases, for example). Secondary prevention is concerned with detecting and acting on the early stages of a problem (for example, prescribing statins to reduce cholesterol).

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ORCID

Matthew A Jay http://orcid.org/0000-0003-2481-7755

References

Academy of Medical Sciences, 2016. *Improving the Health of the Public by 2040*. [Online]. Available: https://acmedsci.ac.uk/policy/policy-projects/health-of-the-public-in-2040. [[Online]. Available].

ADRUK, 2023. *Crime & Justice*. [Online]. Available: https://www.adruk.org/our-work/crime-justice/. [Accessed 21/08/2023].

Allnatt, G., Elliott, M., Scourfield, J., Lee, A. & Griffiths, L. J., 2022. Use of Linked Administrative Children's Social Care Data for Research: A Scoping Review of Existing UK Studies. *The British Journal of Social Work*, 52 (7), 3923–3944. doi:10.1093/bjsw/bcac049.

Angelerius, Q. T. 1598. *Epidemiologia sive Tractus de Peste ad Regis Sardiniæ Proregem*. Matriti: Ex Typographia Regia.

Bainham, A, 2013. Private and Public Children Law: An Under-Explored Relationship. *Child and Family Law Quarterly*, 25, 138–158.

Barnett, A. 2020. *Domestic Abuse and Private Law Children Cases: A Literature Review*. [Online]. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/895175/domestic-abuse-private-law-children-cases-literature-review.pdf. [Accessed 02/05/2023].

Bedston, S., Pearson, R. J., Jay, M. A., Broadhurst, K. & Gilbert, R. 2020. Data Resource: Children and Family Court Advisory and Support Service (Cafcass) Public Family Law Administrative Records in England. *Int J Popul Data Sci*, 5 (1), 17. doi:10.23889/ijpds.v5i1.1159.

Bedston, S., Philip, G., Youansamouth, L., Clifton, J., Broadhurst, K., Brandon, M. & Hu, Y., 2019. Linked Lives: Gender, Family Relations and Recurrent Care Proceedings in England. Children & Youth Services Review, 105, 104392. doi:10.1016/j.childyouth.2019.104392.

Berkman, L., Kawachi, I. & Glymour, M. 2014. *Social Epidemiology 2nd Ed*. Oxford: Oxford University Press.

Bianucci, R., Benedictow, O. J., Fornaciari, G. & Giuffra, V. 2013. Quinto Tiberio Angelerio and New Measures for Controlling Plague in 16th-Century Alghero, Sardinia. *Emerging Infectious Disease Journal*, 19, 1478.

Broadhurst, K., Alrouh, B., Yeend, E., Harwin, J., Shaw, M., Pilling, M., Mason, C. & Kershaw, S. 2015. Connecting Events in Time to Identify a Hidden Population: Birth Mothers and Their Children in Recurrent Care Proceedings in England. *The British Journal of Social Work*, 45, 2241–2260.

Broadhurst, K., Budd, T. & Williams, T. 2018. *The Nuffield Family Justice Observatory for England and Wales: Making it Happen*. [Online]. Available: https://www.nuffieldfoundation.org/publications/nuffield-family-justice-observatory-making-it-happen. [Accessed 29/09/2023].

Broadhurst, K., Cusworth, L., Harwin, J., Alrouh, B., Bedston, S., Trinder, L., Jones, K., Ford, D. & Griffiths, L., 2021. Scaling Up Research on Family Justice Using Large-Scale Administrative Data: An Invitation to the Socio-Legal Community. *Journal of Social Welfare and Family Law*, 43 (3), 237–255. doi:10.1080/09649069.2021.1953856.

Broadhurst, K., Mason, C., Bedston, S., Alrouh, B., Morriss, L., Mcquarrie, T., Palmer, M., Shaw, M., Harwin, J. & Kershaw, S. 2017. *Vulnerable Birth Mothers and Recurrent Care Proceedings*. [Online]. Available: https://www.nuffieldfoundation.org/wp-content/uploads/2019/11/a7pppykncjiwcpi0vgbi6a2prkglcc7v.pdf. [Accessed 02/05/2023].

Burris, S., Ashe, M., Levin, D., Penn, M. & Larkin, M., 2016. A Transdisciplinary Approach to Public Health Law: The Emerging Practice of Legal Epidemiology. *Annual Review of Public Health*, 37 (1), 135–148. doi:10.1146/annurev-publhealth-032315-021841.

Burris, S., Cloud, L. K. & Penn, M. 2020. The Growing Field of Legal Epidemiology. *Journal of Public Health Management and Practice*, 26 (Supp 2), S4–S9.

Burris, S., Kawachi, I. & Sarat, A. 2002. Integrating Law and Social Epidemiology. *J Law Med Ethics*, 30, 510–21.

Burris, S., Wagenaar, A. C., Swanson, J., Ibrahim, J. K., Wood, J. & Mello, M. M. 2010. Making the Case for Laws That Improve Health: A Framework for Public Health Law Research. *Milbank Q*, 88, 169–210.

Bywaters, P. 2017. *Identifying and Understanding Inequalities in Child Welfare Intervention Rates: Comparative Studies in Four UK Countries. Briefing Paper 2: UK Four Country Quantitative Comparison*. [Online]. Available: https://www.nuffieldfoundation.org/wp-content/uploads/2017/03/16469-17-CWIP-BRIEFING-2-FINAL.pdf. [Accessed 02/05/2023].

Bywaters, P., Scourfield, J., Jones, C., Sparks, T., Elliott, M., Hooper, J., Mccartan, C., Shapira, M., Bunting, L. & Daniel, B., 2020. Child Welfare Inequalities in the Four Nations of the UK. *Journal of Social Work*, 20 (2), 193–215. doi:10.1177/1468017318793479.

CAFCASS, 2023. *Our Data*. [Online]. Available: https://www.cafcass.gov.uk/about-cafcass/our-data/. [Accessed 29/08/2023].

Cusworth, L., Bedston, S., Alrouh, B., Broadhurst, K., Johnson, R. D., Akbari, A. & Griffiths, L. J 2021. *Uncovering Private Family Law: Who's Coming to Court in England?*. [Online]. Available: https://www.nuffieldfjo.org.uk/resource/private-family-law-whos-coming-to-court-england. [Accessed 29/08/2023].

Cusworth, L., Hargreaves, C., Alrouh, B., Broadhurst, K., Griffiths, L. J., Akbari, A., Doebler, S. & John, A. 2021. *Uncovering Private Family Law: Adult Characteristics and Vulnerabilities (Wales)*. [Online]. Available: https://www.nuffieldfjo.org.uk/resource/uncovering-private-family-law-adult-characteristics-and-vulnerabilities-wales. [Accessed 02/05/2023].

Dahlgren, G. & Whitehead, M., 2021. The Dahlgren-Whitehead Model of Health Determinants: 30 Years on and Still Chasing Rainbows. Public Health, 199, 20–24. doi:10.1016/j.puhe.2021.08.009.

Department for education. 2016. *Using a Consistent Identifier - Education and children's Services*. [Online]. Available: https://www.gov.uk/government/publications/using-a-consistent-identifier-education-and-childrens-services. [Accessed 23/01/2024].

Department for education, 2021. *Children Act 1989: Care Planning, Placement and Case Review*. [Online]. Available: https://www.gov.uk/government/publications/children-act-1989-care-planning-placement-and-case-review. [Accessed 29/08/23].

Department for education, 2023a. *Children in Need*. [Online]. Available: https://explore-education-statistics.service.gov.uk/find-statistics/characteristics-of-children-in-need. [Accessed 06/01/2024].

Department for education, 2023b. *Children Looked After in England Including Adoptions*. [Online]. Available: https://explore-education-statistics.service.gov.uk/find-statistics/children-looked-after-in-england-including-adoptions. [Accessed 04/01/23].

Diderichsen, F., Hallqvist, J. & Whitehead, M. 2018. Differential Vulnerability and Susceptibility: How to Make Use of Recent Development in Our Understanding of Mediation and Interaction to Tackle Health Inequalities. *International Journal of Epidemiology*, 48, 268–274.

Downs, J., Gilbert, R., Hayes, R., Hotopf, M. & Ford, T., 2017. Linking Health and Education Data to Plan and Evaluate Services for Children. *Archives of Disease in Childhood*, 102 (7), 599. doi:10.1136/archdischild-2016-311656.

Emmott, E. H., Jay, M. A. & Woodman, J., 2019. Cohort Profile: Children in Need Census (CIN) Records of Children Referred for Social Care Support in England. *BMJ Open*, 9 (2), e023771. doi:10.1136/bmjopen-2018-023771.

Fazel, S., Singh, J., Doll, H. & Grann, M., 2012. Use of Risk Assessment Instruments to Predict Violence and Antisocial Behaviour in 73 Samples Involving 24 827 People: Systematic Review and Meta-Analysis. *BMJ: British Medical Journal*, 345 (jul24 2), e4692. doi:10.1136/bmj.e4692.

Genn, H., 2019. When Law is Good for Your Health: Mitigating the Social Determinants of Health Through Access to Justice. *Current Legal Problems*, 72 (1), 159–202. doi:10.1093/clp/cuz003.

Genn, H., Partington, M. & Wheeler, S. 2006. *Law in the Real World: Improving Our Understanding of How Law Works*. [Online]. Available: https://www.ucl.ac.uk/judicial-institute/sites/judicial-institute/files/law_in_the_real_world_-_improving_our_understanding_of_how_law_works.pdf. [Accessed 29/06/2023].

Green, R., 2021. The Modernisation of Family Justice Before and Beyond the Pandemic: How Can Complexity Theory Help Us Understand the Progress and Limitations of the Reforms? *Journal of Social Welfare and Family Law*, 43 (4), 439–454. doi:10.1080/09649069.2021.1996080.

Griffiths, L. J., Johnson, R. D., Broadhurst, K., Bedston, S., Cusworth, L., Alrouh, B., Ford, D. V. & John, A., 2020. Maternal Health, Pregnancy and Birth Outcomes for Women Involved in Care Proceedings in Wales: A Linked Data Study. *BMC Pregnancy and Childbirth*, 20 (1), 697. doi:10.1186/s12884-020-03370-4.

Griffiths, L. J., Mcgregor, J., Pouliou, T., Johnson, R. D., Broadhurst, K., Cusworth, L., North, L., Ford, D. V. & John, A., 2022. Anxiety and Depression Among Children and Young People

Involved in Family Justice Court Proceedings: Longitudinal National Data Linkage Study. *BJPsych Open*, 8 (2), e47. doi:10.1192/bjo.2022.6.

Halliday, E., Green, R. & Marsh, B. 2017. *Private Law Cases That Return to Court: A Cafcass Study.* [Online]. Available: https://www.cafcass.gov.uk/about-cafcass/research/cafcass-research/. [Accessed 02/05/2023].

Herbert, A., Wijlaars, L., Zylbersztejn, A., Cromwell, D. & Hardelid, P., 2017. Data Resource Profile: Hospital Episode Statistics Admitted Patient Care (HES APC). *International Journal of Epidemiology*, 46 (4), 1093–1093i. doi:10.1093/ije/dyx015.

Howe, L. D., Tilling, K., Galobardes, B. & Lawlor, D. A., 2013. Loss to Follow-Up in Cohort Studies: Bias in Estimates of Socioeconomic Inequalities. *Epidemiology*, 24 (1), 1–9. doi:10.1097/EDE.0b013e31827623b1.

Hunter, R., Burton, M. & Trinder, L. 2020. *Assessing Risk of Harm to Children and Parents in Private Law Children Cases: Final Report.* [Online]. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/895173/assessing-risk-harm-children-parents-pl-childrens-cases-report_.pdf. [Accessed 29/08/2023].

Jay, M. A. 2020. Legal Epidemiology, Evidence-Informed Law and Administrative Data: New Frontiers in the Study of Family Justice. In: Creutzfeldt, N., Mason, M. & McConnachie, K., eds. *Routledge Handbook of Socio-Legal Theory and Methods.* Abingdon: Routledge, 369–384.

Jay, M. A., B. DE Stavola , Dorsett, R., Thomson, D. & Gilbert, R., 2023. *Model Estimates of Cumulative Incidence of Children in Need Status and Referral to children's Social Care (Pre-Print).* [Online]. Available: https://osf.io/6ecrz/. [Accessed 25/11/23].

Jay, M. A., Mc Grath-Lone, L. & Gilbert, R., 2019. Data Resource: The National Pupil Database (NPD). *International Journal of Population Data Science*, 4 (1), 08.

Jay, M. A., Pearson, R. J., Wijlaars, L., Olhede, S. & Gilbert, R. 2019. *Using Administrative Data to Quantify Overlaps Between Public and Private Children Law in England.* [Online]. Available: https://www.ucl.ac.uk/child-health/sites/child-health/files/research-ppp-legal-epi-jay-et-al-moj-datashare-full.pdf. [Accessed 02/05/2023].

Jay, M. A., Woodman, J., Broadhurst, K. & Gilbert, R. 2017. *Towards a Family Justice Observatory: A Scoping Study: Who Cares for Children? Population Data for Family Justice Research.* [Online]. Available: http://wp.lancs.ac.uk/observatory-scoping-study/. [Accessed 02/05/2023].

Jay, M. A., Woodman, J., Broadhurst, K. & Gilbert, R. 2018. Harnessing Administrative Data for Family Justice Research and Practice. *Family Law*, 315–319.

Johnson, R. D., Ford, D. V., Broadhurst, K., Cusworth, L., Jones, K. H., Akbari, A., Bedston, S., Alrouh, B., Doebler, S., Lee, A., Smart, J., Thompson, S., Trinder, L. & Griffiths, L. J. 2020. Data Resource: Population Level Family Justice Administrative Data with Opportunities for Data Linkage. *Int J Popul Data Sci*, 5, 1339.

Johnson, R. D., North, L., Alrouh, B., John, A., Jones, K., Akbari, A., Smart, J., Thompson, S., Hargreaves, C., Doebler, S., Cusworth, L., Broadhurst, K., Ford, D. V. & Griffiths, L. J. 2022. A Population Level Study into Health Vulnerabilities of Mothers and Fathers Involved in Public Law Care Proceedings in Wales, UK Between 2011 and 2019. *Int J Popul Data Sci*, 7, 1723.

Johnson, S. J. 1755& 1773. *2021. A Dictionary of the English Language. In*: Beth Rapp Young, Jack Lynch, William Dorner, Amy Larner Giroux, Carmen Faye Mathes, and Abigail Moreshead eds. Available: *https://johnsonsdictionaryonline.com*. [Accessed 6/01/2024].

Kaspiew, R., Carson, R., Dunstan, J., Qu, L., Horsfall, B., J. DE Maio, & Moore, S., 2015. *Evaluation of the 2012 Family Violence Amendments.* [Online]. Available: https://aifs.gov.au/sites/default/files/efva2012-synthesis-report_0.pdf. [Accessed 2/05/2023].

Kuh, D., BEN-SHLOMO, Y., Lynch, J., Hallqvist, J. & Power, C. 2003. Life Course Epidemiology. *J Epidemiol Community Health*, 57, 778–83.

Lash, T., Vanderweele, T., Haneuse, S. & Rothman, K. 2020. *Modern Epidemiology 4th Edn.* Philadelphia: Wolters Kluwer.

Marmot, M., Allen, J., Goldblatt, P., Boyce, T., Mcneish, D., Grady, M. & Geddes, I. 2010. *Fair Society, Healthy Lives (The Marmot Review).* [Online]. Available: https://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review. [Accessed 4/1/2024].

Marmot, M. G., Stansfeld, S., Patel, C., North, F., Head, J., White, I., Brunner, E., Feeney, A., Marmot, M. G. & Smith, G. D., 1991. Health Inequalities Among British Civil Servants: The Whitehall II Study. *The Lancet*, 337 (8754), 1387–1393. doi:10.1016/0140-6736(91)93068-K.

Masson, J., 2023. Off the Menu? Should Care Orders at Home Only Be Made in Exceptionally Rare Circumstances? *Journal of Social Welfare and Family Law*, 45 (4), 392–395. doi:10.1080/09649069.2023.2281842.

Mc Grath-Lone, L., Dearden, L., Nasim, B., Harron, K. & Gilbert, R., 2016. Changes in First Entry to Out-Of-Home Care from 1992 to 2012 Among Children in England. *Child Abuse & Neglect*, 51, 163–171.

Mc Grath-Lone, L., Harron, K., Dearden, L., Nasim, B. & Gilbert, R., 2016. Data Resource Profile: Children Looked After Return (CLA). *International Journal of Epidemiology*, 45, 716–717f.

Mc Grath-Lone, L., Jay, M. A., Blackburn, R., Gordon, E., Zylbersztejn, A., Wiljaars, L. & Gilbert, R., 2022. What Makes Administrative Data "Research-Ready"? A Systematic Review and Thematic Analysis of Published Literature. *Int J Popul Data Sci*, 7, 1718.

Ministry of Justice. 2010. *Proposals for the Reform of Legal Aid in England and Wales*. [Online]. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/228970/7967.pdf. [Accessed 29/08/2023].

Ministry of Justice. 2022. *Ministry of Justice: Data First*. [Online]. Available: https://www.gov.uk/guidance/ministry-of-justice-data-first. [Accessed 29/08/2023].

Ministry of Justice. 2023. *Supporting Earlier Resolution of Private Family Law Arrangements*. [Online]. Available: https://www.gov.uk/government/consultations/supporting-earlier-resolution-of-private-family-law-arrangements. [Accessed 29/08/2023].

National Institute of Health and Care Research, 2019. *PPI (Patient and Public Involvement) Resources for Applicants to NIHR Research Programmes*. [Online]. Available: https://www.nihr.ac.uk/documents/ppi-patient-and-public-involvement-resources-for-applicants-to-nihr-research-programmes/23437. [Accessed 04/01/24].

NHS Digital, 2023. *Hospital Episode Statistics (HES)*. [Online]. Available: https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/hospital-episode-statistics. [Accessed 05/01/24].

Office for National Statistics, 2023. *What We Know from Engaging with the Public on Data: June 2023*. [Online]. Available: https://www.ons.gov.uk/aboutus/usingpublicdatatoproducestatistics/peoplesattitudestodata/whatweknowfromengagingwiththepublicondatajune2023.

Pearson, R. J., Grant, C., Wijlaars, L., Finch, E., Bedston, S., Broadhurst, K. & Gilbert, R., 2022. Mental Health Service Use Among Mothers Involved in Public Family Law Proceedings: Linked Data Cohort Study in South London 2007–2019. *Social Psychiatry and Psychiatric Epidemiology*, 57 (10), 2097–2108. doi:10.1007/s00127-022-02221-1.

Pearson, R. J., Jay, M. A., Wijlaars, L. P. M. M., Stavola, B. D., Syed, S., Bedston, S. J. & Gilbert, R. 2020. Association Between Health Indicators of Maternal Adversity and the Rate of Infant Entry to Local Authority Care in England: A Longitudinal Ecological Study. *BMJ Open*, 10, e036564.

Porta M. ED., 2016. *A Dictionary of Epidemiology*. 6 edn) ed. Oxford: Oxford University Press.

Rose, G., Khaw, K.-T. & Marmot, M. 2008. Rose's Strategy of Preventive Medicine. Oxford: Oxford University Press.

Royal College of Paediatric and Child Health, n.d. *NHS Number as a Unique Identifier for Children – Position Statement*. [Online]. Available: https://www.rcpch.ac.uk/resources/nhs-number-unique-identifier-children-position-statement. [Accessed 21/01/2024].

Stevens, M. 2018. Preventing At-Risk Children from Developing Antisocial and Criminal Behaviour: A Longitudinal Study Examining the Role of Parenting, Community and Societal Factors in Middle Childhood. *BMC Psychol*, 6, 40.

Teyhan, A.Boyd, A., Wijedasa, D. & Macleod, J., 2019. Early Life Adversity, Contact with children's Social Care Services and Educational Outcomes at Age 16 Years: UK Birth Cohort Study with Linkage to National Administrative Records. *BMJ Open*, 9, e030213.

Thomas, C. 2018. *Care Crisis Review: Factors Contributing to National Increases in Numbers of Looked After Children and Applications for Care Orders*. [Online]. Available: https://frg.org.uk/policy-and-campaigns/the-care-crisis-review/. [Accessed 29/08/2023].

UK Data Service. n.d. *What is the Five Safes Framework?*. [Online]. Available: https://ukdataservice.ac.uk/help/secure-lab/what-is-the-five-safes-framework/. [Accessed 23/01/2024].

UK Research and Innovation, 2023. *Cohort Directory*. [Online]. Available: https://www.ukri.org/councils/mrc/facilities-and-resources/find-an-mrc-facility-or-resource/cohort-directory/. [Accessed 04/01/24].

Wijedasa, D., Warner, N. & Scourfield, J. 2018. *Exploratory Analyses of the Rates of Children Looked After in English Local Authorities (2012-2017)*. [Online]. Available: https://whatworks-csc.org.uk/wp-content/uploads/Exploratory_analysis_of_the_rates_of_children_looked_after_in_English_local_authorities.pdf. [Accessed 02/05/2023].

Wilkinson, J. & Bowyer, S. 2017. *The Impacts of Abuse and Neglect on Children; and Comparison of Different Placement Options*. [Online]. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/602148/Childhood_neglect_and_abuse_comparing_placement_options.pdf. [Accessed 29/08/2023].

Woodman, J., Lecky, F., Hodes, D., Pitt, M., Taylor, B. & Gilbert, R., 2010. Screening Injured Children for Physical Abuse or Neglect in Emergency Departments: A Systematic Review. *Child: Care, Health and Development*, 36 (2), 153–164. doi:10.1111/j.1365-2214.2009.01025.x.