

Evaluating Documentation of Social History in Paediatric Medical Notes at a Regional Paediatric Centre – A Quality Improvement Initiative.

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Abstract

Background A child's home and family environment plays a vital role in neuro-cognitive and emotional development. Assessment of a child's home environment and social circumstances is an crucial part of holistic Paediatric assessment.

Aims Our aim is to achieve full compliance with comprehensive documentation of biopsychosocial history, for all children medically admitted to the children's inpatient unit in University Hospital Limerick.

Methods We performed a retrospective chart review to audit documentation within our department. This was followed by teaching interventions and a survey on knowledge, attitudes and behaviour of paediatric non-consultant hospital doctors (NCHDs) towards the social history. We performed two subsequent re-audits to assess response to our interventions, and provided educational sessions to seek improvement in quality of care.

Results Results showed a significant improvement in quality of documentation following interventions, demonstrated by a net increase of 53% in levels of documentation of some social history on first re-audit. Though this was not maintained at an optimum level throughout the course of the year with compliance reduced from 95% to 82.5% on second re-audit, there was nonetheless a sustained improvement from our baseline. Our qualitative survey suggested further initiatives and educational tools that may be helpful in supporting the ongoing optimisation of the quality of documentation of social history in our paediatric department.

Conclusion We hope this quality improvement initiative will ultimately lead to sustained improvements in the quality of patient-centred care, and early identification and intervention for children at risk in our community.

Introduction

Research has shown that a child's home and family environment plays a vital role in neuro-cognitive and emotional development (1). The interplay between ecology, biology and child health and development is vital in holistic paediatric healthcare. Much of the fundamentals of child health can be improved by interventions focusing on physiological, socio-environmental, and health and well-being measures.

Ireland has the highest birth rate in the European Union (12.6 per 1,000 population) and 21.1% of the population is under fifteen years of age (2)(3). University Hospital Limerick serves a catchment area of over 100,000 children less than 16 years of age, many from diverse ethnicities and socio-economic backgrounds. In our hospital catchment area, the 'Mid-West' of Ireland, 24.7% of the population are classified as living in a disadvantaged or extremely disadvantaged area (4). Within Limerick City itself, 40% of the population are classified as living in a disadvantaged area (4). This level of socio-economic deprivation may affect our epidemiology in comparison to other areas, and certainly highlights the importance of the social history as part of medical admission documentation

Aims

Our aim is to achieve 100% compliance with comprehensive documentation of biopsychosocial history of all children on admission to the Children's inpatient in Limerick University Hospital.

Our objective is to assess the quality of documentation of biopsychosocial history at point of admission of medically admitted paediatric patients. We will analyse this information, compare it with national and international paediatric standards, and will present the results to our paediatric colleagues. We will then provide teaching sessions and quality improvement initiatives to improve standards of care.

Methods

A sample of 75 patient charts from our paediatric inpatient wards were reviewed over a three-week period from August to September 2019. Patient charts selected included both acute admissions and elective transfers. Medical paediatric charts only were included – patient charts were excluded if they were admitted under a surgical speciality. Audit data was collected in an anonymous fashion using a standardized data collection tool and analysis was performed manually. Data was stored in line with GDPR requirements.

Standards used were those set by the Health Service Executive (HSE), providing guidance on documentation for medical admission entries. This is available as an online resource titled 'HSE Standards and Recommended Practices for Healthcare Records Management' (May 2014) for use in all patients (5). Another HSE document titled 'Integrated Care Guidance: A practical guide to discharge and transfer from hospital' also supports the thorough documentation of social history as part of admission documentation and best practice care for our patients (6). These document highlight the importance of the social history as part of medical assessment and admission documentation, and that it is part of the HSE standards and best practice to do so.

Data points collected on documentation of paediatric social history included but were not limited to information on housing, household constituents, ethnicity, parental literacy, school attendance and support services. Following the results of this audit we completed the 'Plan, Do, Study, Act' (PDSA) cycle. We analysed this data and presented the results to our paediatric colleagues in a constructive learning environment, as a reflection of current practice. Multiple teaching sessions were provided to medical staff within our paediatric unit following this audit. We then re-audited our practice four months later, with review of 20 patient charts.

We performed an anonymous staff survey to assess knowledge, attitudes and behaviour towards documentation of the social history. This included collection of qualitative data volunteered by non-consultant hospital doctors (NCHDs) on subjective barriers to documentation of a Paediatric social history. We provided a further 'refresher' teaching session to medical staff within our paediatric unit following this re-audit. We subsequently performed a final re-audit of 40 patients and presented these results to our department. See summary of study methods in figure I, below.

Results

A Primary audit:

Documentation of any social history occurred in 31 of 75 charts analysed (41%). The most common areas documented were parental marital status and household constituents. Areas which may have important implications for disease progression, include smoking status and type of home accommodation were recorded in two (2.6%) and zero (0%) charts respectively. Parental occupation was documented in two (2.6%), presence of pets in the home in one (1.3%) and parental literacy in zero (0%) cases (see figure II below).

B Re-audit I:

Some improvements were noted on the first re-audit on documentation of social history. Most notably, the percentage of patients with any social history documented increased from 41.3–95% of patients. This translates to an improvement of 230% on the original rate, and net increase of 53.7% (figure IIIa below).

See figure IIIb demonstrating documentation of various aspects of the paediatric social history.

C Staff survey:

This survey was released at two timepoints. It was first circulated following re-audit I, and was then re-released once again several months later prior to re-audit II, to target those who did not complete the survey on the first instance. The questions remained the same and each paediatric doctor filled the survey just once. A total of 13 non-consultant hospital doctors (three interns, six senior house officers and four registrars) completed the survey.

NCHDs self-reported that they attempted to take a social history 'always' or 'often' 84.6% of the time. They were most likely to take a social history in the emergency department (53.8%), followed by the inpatient paediatric ward (38.5%) and least likely to obtain social history in the outpatient department (7.7%). They felt more likely to take a social history for an emergency (76.9%) than elective (23.1%) admission. Participants felt more likely to document a social history between normal daytime working hours of 9 and 5 pm (84.6%). Fatigue and increased workload negatively affected ability to document social history.

NCHDs felt more likely to omit a social history in the emergency department if they felt the child was not going to require admission to the inpatient ward. 38.5% of NCHDs felt that they often or sometimes forget to document a social history, in contrast with 61.6% who subjectively felt that they rarely or never forgot to document this. Other factors discouraging our NCHDs from taking a social history include feeling 'nosy', 'embarrassed' or that they may 'offend' parents, or indeed feeling that the environment is not appropriate to ask such confidential information. Symptoms of fatigue and sleep deprivation, and an increased workload were subjectively felt to negatively affect the NCHDs ability to complete a social history most of the time (figure IV).

D Re-audit II:

33 of 40 patients (82.5%) had some element of social history documented in the second re-audit. This is a reduction on results of previous re-audit from 95%. Household constituents and relationship of the child to the primary carer were most likely to be documented – both 67.5% of the time. School attendance was noted in 25% of children – although in those under the age of four years old, primary school attendance is not applicable due to age. In Ireland, children are entitled to free pre-schooling from approximately two years eight months old onwards. In this study, one child was documented as attending pre-school. Parental literacy, language skills and respite or additional social supports were not documented in any cases. Parental smoking status and presence or absence of pets in the home was documented in 10% and 17.5% respectively. Figure V below summarises results of primary audit and re-audit I and II.

Discussion

The 2016 Irish census demonstrated that a higher proportion of children are now living in rented accommodation and in flats and apartments, leaving families somewhat more vulnerable than those in an 'owned' home (3). Housing instability including homelessness, frequent changes in accommodation and arrears in rent can result in adverse outcomes. Fifteen-hundred families in Ireland are homeless, including over 3,300 children (7). This figure does not include hidden homelessness, where families are relying on family and friends to provide temporary accommodation.

The family unit and housing instability

Lone parents and children of lone parents are particularly at-risk groups for social deprivation. These groups have a persistently higher absolute social risk gap in income poverty in comparison with their counterparts in the EU. This cohort accounts for 27% of Irish children (8). As a result, these children in lone parent families and those living with disability are much more vulnerable to poverty and deprivation compared to traditional family units and those without disability (8).

Adverse childhood experiences (ACEs) can lead to increased rates of common childhood conditions such as asthma, headaches and allergies and poorer self-reported health (9). ACEs may include neglect or environmental stressors such as living with substance abuse or domestic violence. The added burden of these co-morbid childhood illnesses may ultimately result in increased school absenteeism and long term negative impacts on education and future economic prospects (9).

Alcohol

Alcohol use in adolescents has become increasingly common over the last two decades. Most presentations of adolescents with acute intoxication tend to occur at weekends and during holiday periods (10). We are increasingly seeing the use of alcohol in combination with other illicit substances eg, marijuana and 3,4-methylenedioxy-methamphetamine (MDMA), and its use may act as a gateway to facilitate progression on to other illicit drugs. A recent Croatian study noted that there was co-morbid drug

use in 6.25% of adolescents presenting to their hospital with acute alcohol intoxication (10). Alcohol can also act as a risk factor for overweight and obesity (11). Heavy alcohol use in parents may increase prevalence of childhood and adolescent consumption of alcohol, and associated negative outcomes (12).

Tobacco and Illicit drug use

Though tobacco use in adolescence and in adulthood has declined in recent years, there has been a startling jump in e-cigarette use in adolescence (13). Maternal smoking may result in reduced lung function in adulthood, and exposure to parental smoking can trigger respiratory infection during the childhood years (14).

Prenatal marijuana exposure may cause attention deficit and hyperactivity symptoms in childhood and adolescence (15). Marijuana exposure may cause severe neurological signs including ataxia, hypotonia, and respiratory compromise in young children (16). Chronic exposure to marijuana in childhood and adolescence can cause permanent neurocognitive damage, psychological morbidity and psychiatric illness (17). There may be increased exposure to marijuana in children living in areas where recreational and medical use of the substance has been legalised (17, 18). A systematic review of sport and drug use in adolescence found that engagement in sporting activities during adolescent years may be a protective factor in preventing use of illicit drugs (19).

Child safe-guarding and parental mental health

Social history is a crucial component of care in assessment of the mother and new-born infant's readiness for discharge from hospital to the community. As this is a particularly vulnerable time for both parties it is vital that the maternal and infant clinical status, social supports and follow-up care plan are appropriate for discharge (20). Education should be adequately completed and any added vulnerabilities safe-guarded (20). Increased psychological distress in mothers has been noted to be a risk factor for Emergency Department presentation within the first year of life, emphasising the need to fully assess the psycho-social situation in the home before discharge (21).

Social history is a key measure in early identification of families who may have vulnerabilities to or ongoing child abuse. By assessing strengths and weaknesses in a child's environment and identifying potential harms, we may prevent or effectively manage many more cases of childhood physical, sexual, or emotional abuse, and neglect. One notable intervention is the Safe Environment for Every Kid (SEEK) model (22, 23), introduced as a trial in paediatric primary care in the United States. This programme successfully improved rates of addressing depression, substance abuse, intimate partner violence, stress and healthcare worker comfort level with perceived competence up to 36 months of age (23).

Intimate partner violence is a significant risk factor for child abuse. A study performed by et al showed that those who were violent with their partners were more likely to use violence against children (24). In a US study 64% of parents reported physical disciplinary measures with their children aged 19–35 months

of age. Early 'spanking' has been shown to be associated with poor cognitive development in early childhood and there is a link with aggression, school-age behavioural problems, and increased risk of physical abuse (25).

Diet and Lifestyle

Many adult diseases can root in early childhood from risk factors such as unhealthy eating habits, poor education and exposure to maltreatment (1). Toxic stress in early childhood can produce physiological changes to the developing brain, immune system and metabolism, which may persist into the adult years (26). As socioeconomic status increases, the trend to healthy weight and distribution of body fat, and improved cardiorespiratory fitness also increases (26). Children who grow up in lower-socioeconomic status households tend to have poorer health in adulthood, irrespective of their own adult socio-economic status (26). Exposure to adverse environments in childhood and in adulthood may contribute to increased mortality from cardiovascular disease and some malignancies, in those from lower socio-economic groups living in more deprived areas (27).

Lower income households have also been shown to have more missed school days and limitation of activities related to asthma control (28).

Ethnicity

Research to date has highlighted the various risks of certain diseases amongst different ethnicities.. Background genetic risks are compounded by social determinants of health and barriers in access to education and care to produce poorer health outcomes (29). Socio-economic status also acts as a significant mediator in race and ethnicity survival association for various childhood malignancies (30). In provision of healthcare, families may feel pressured to conform to Western rituals which differ from their own belief system and values. The cultural beliefs of a family with regard to healthcare provision and end of life care should be explored in a sensitive manner, and the integrity of these customs and provisions should be preserved (31). It is also important to note that migrant children and adolescents have higher rates of suicidal ideation and suicide attempts. This again highlights the need for culturally sensitive preventative and intervention measures (32).

Direct provision is one area of particular vulnerability in our social care system. In October 2018 there were over 6,000 people living in direct provision, with nearly 1,800 of these being children (33). These families live in restrictive environments with many other families and individuals, and without adequate access to kitchen facilities and recreational space. The effect this social exclusion has on children living in this environment can have a dramatic impact on child health and well-being, and higher risk of spread of infectious diseases (33). Most recent reports have shown that approximately 14% of all children living in direct provision have been referred to the child and family agency for social work supports, compared to 1.6% of children in the general population (34).

Overall our study highlights the gaps in documentation of a paediatric social history and the challenges that we face in improving this. Though there was an initial marked improvement with the quality of documentation following multiple teaching interventions, when this was sub-optimally sustained despite provision of refresher sessions.

When qualitative information was sought of our NCHD cohort as to barriers in obtaining a paediatric social history, time constraints, tiredness and sleep deprivation were quoted. Some NCHDs felt that many parents did not understand the reasons for taking a social history and that they therefore felt uncomfortable asking such questions, subsequently deterring doctors further. More unexpectedly, NCHDs felt that senior consultant colleagues did not 'pay any attention to the social history' in the midst of the medical facts. This feedback implied that there may be an institutional under-estimation of the importance of the social history. NCHDs suggested that further departmental teaching sessions encouraging documentation of the social history would be important. General feedback from the survey suggested that further teaching sessions may be helpful for all paediatric staff, including confidential discussion of patient cases where the social history was key in identification of socioeconomic risk factors or child safe-guarding, and where social history was key in holistic bio-psycho-social patient management.

Important confounding factors include the changeover of medical staff. Though most doctors remained in the department for the full year (July 2019- July 2020), a several registrars and senior house officers, and all of the interns left the department after a 3–6 month rotation. This changeover in staff can affect knowledge of and consistency in documentation reflected in our audit. Another limiting factor affecting our results may be the intercurrent pandemic and its effect on staffing issues and departmental provision of education sessions.

The use of various tools as memory aids and to trigger reminder of importance of documenting the paediatric social history as part of a child's medical record may be helped by the use of standardised tools such as IHELLP. This tool has been shown to significantly improve documentation of the paediatric social history (35). This tool triggers the interviewer to inquire about income supports, housing, education, legal and immigration status, language and personal safety. This tool was examined in one study of over 600 Paediatric admissions made by 87 doctors. Education sessions were provided to the intervention group prior to commencement of the study. More than 80% of the intervention team documented a social history using the IHELP aide, and a subsequent three-fold increase in social work consults made by the intervention team in contrast with the control team (36).

Conclusion

Our job as healthcare professionals is to ensure that patient care needs are best met. National guidelines suggest that by assessing the needs of individuals we must take into account the physical, psychological, social and emotional needs of the person (6). This will result in effective planning of healthcare that is tailored to the individual, and minimised delays in discharge.

Documentation of social history is vital as a part the patient's medical record. Understanding a child's social background is key to optimizing their emotional and physical well-being. The social history is a tool which enables us to do this, and to lead us on a path which may identify risks to the child, and indeed parental frustrations and challenges. It may uncover risks such as sub-optimal home living conditions, exposure to substance misuse, primary carer mental health issues or a gap in service provision. By supporting a child's home environment and by attempting to understand the various cultural and family dynamics which may apply, we can optimize child health in a holistic and long-lasting way, that will not only benefit their health but the health of the family unit.

Declarations

Funding -

No funding obtained

Availability of data and material –

stored securely in line with GDPR guidelines

Conflicts of interest / Competing interests –

Nothing to declare

Ethics approval and consent to participate –

Approval obtained from University Hospital Limerick Audit Committee

Consent for publication -

Not required

Availability of data and material -

Data generated or analysed during this study are included in this published article, and in its supplementary information files

Competing interests -

The authors declare that they have no competing interests

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Figures

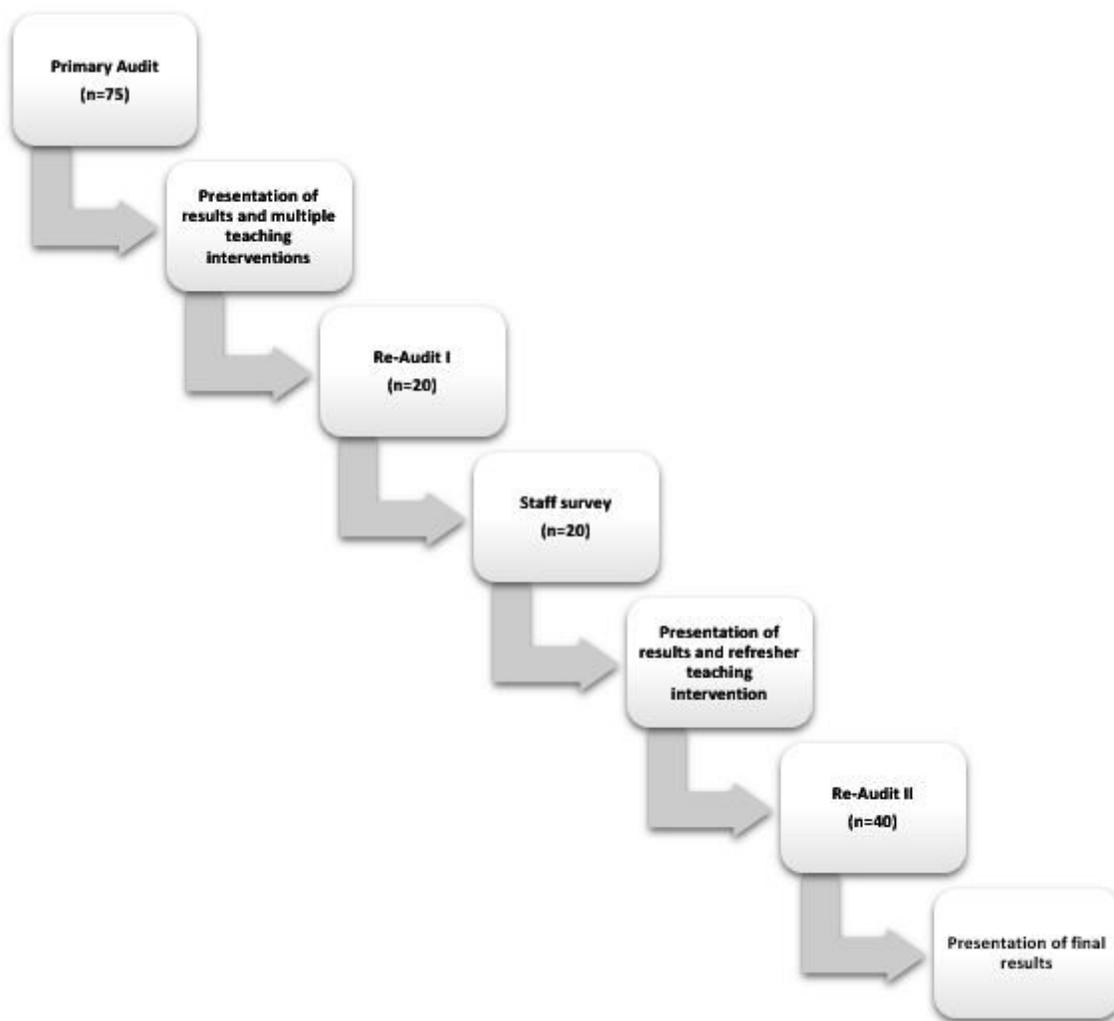


Figure 1

Study methods

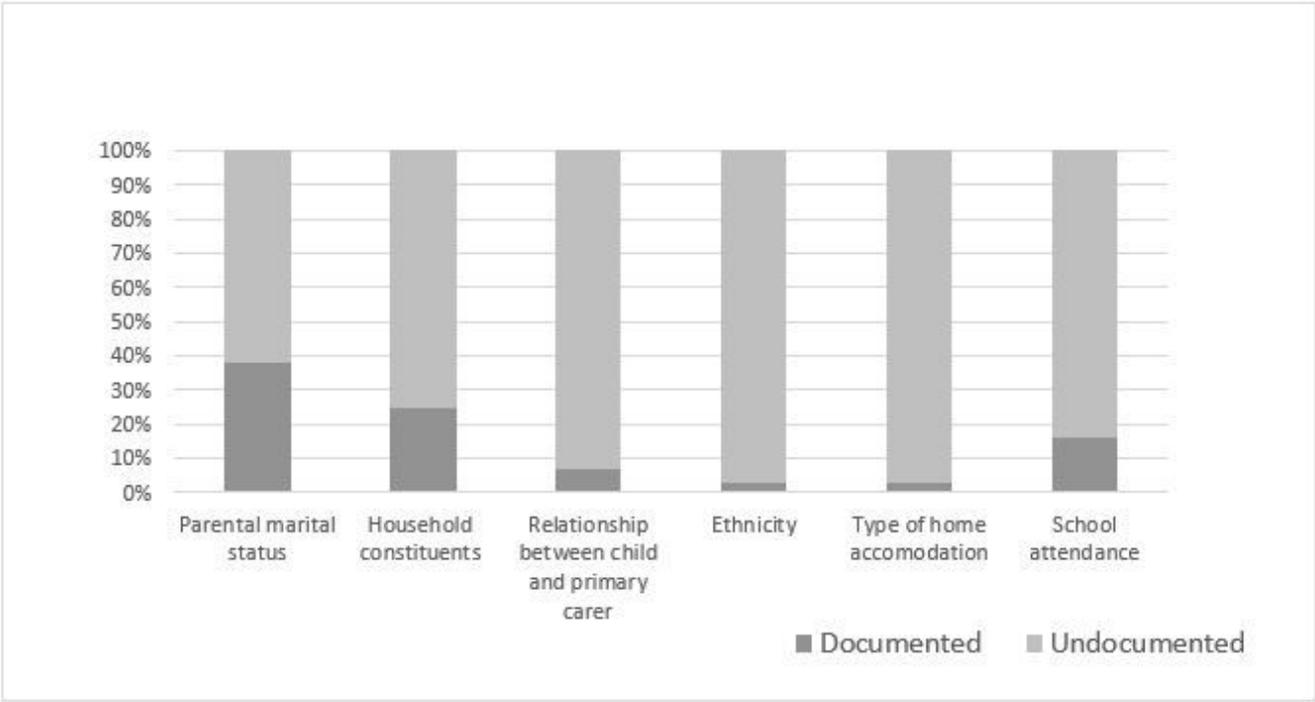


Figure 2

Primary Audit – documentation of constituents of social history.

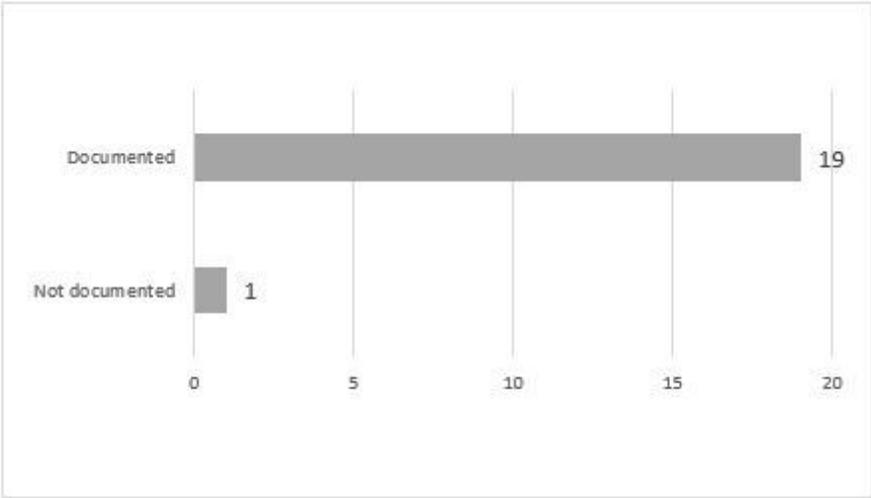


Figure 3

IIIa: Re-audit I - documentation of any social history on admission.

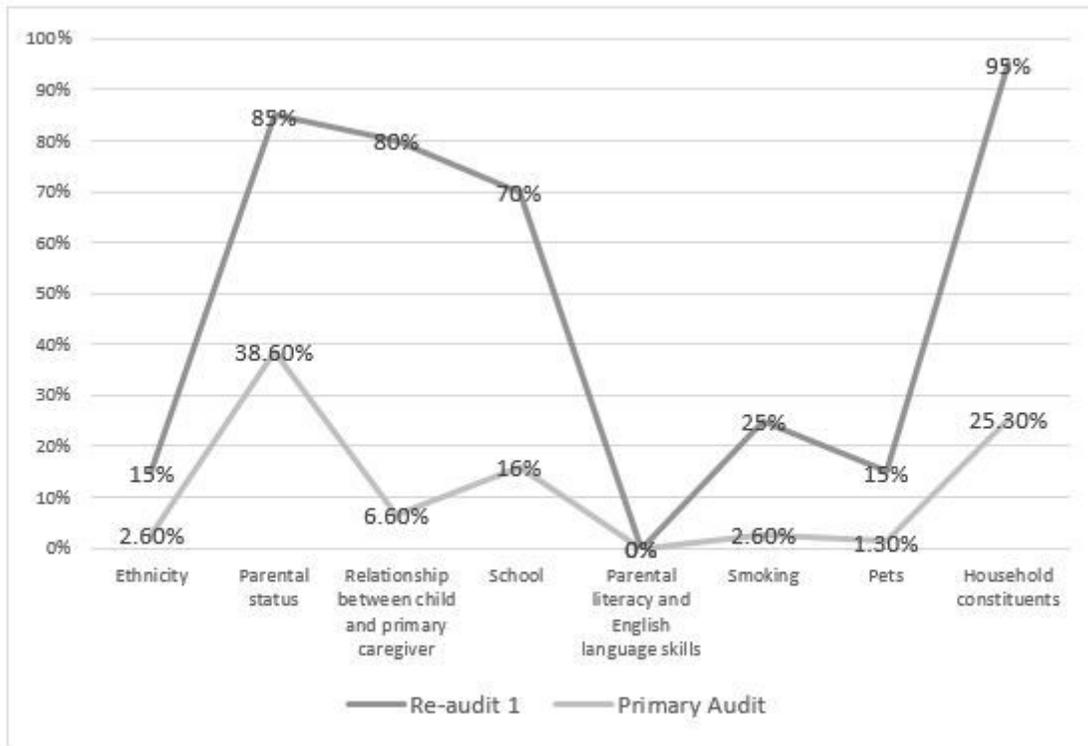


Figure 4

IIIb: Results of re-audit of documentation of social history (Audit vs Re-audit I)

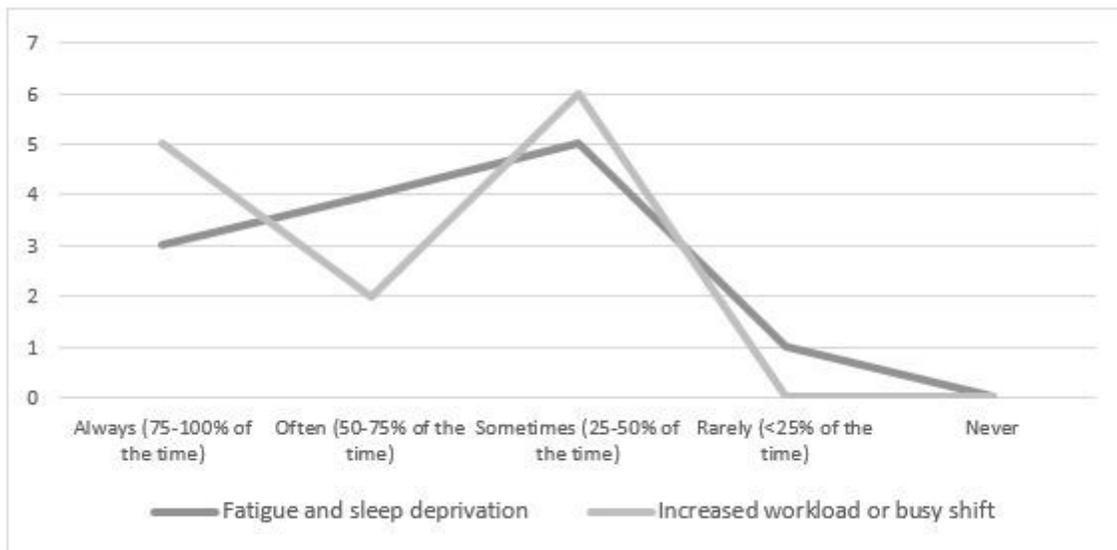


Figure 5

Survey results - Barriers to documentation of a social history. 'How often are the following factors felt to negatively affect NCHDs ability to document a social history?'

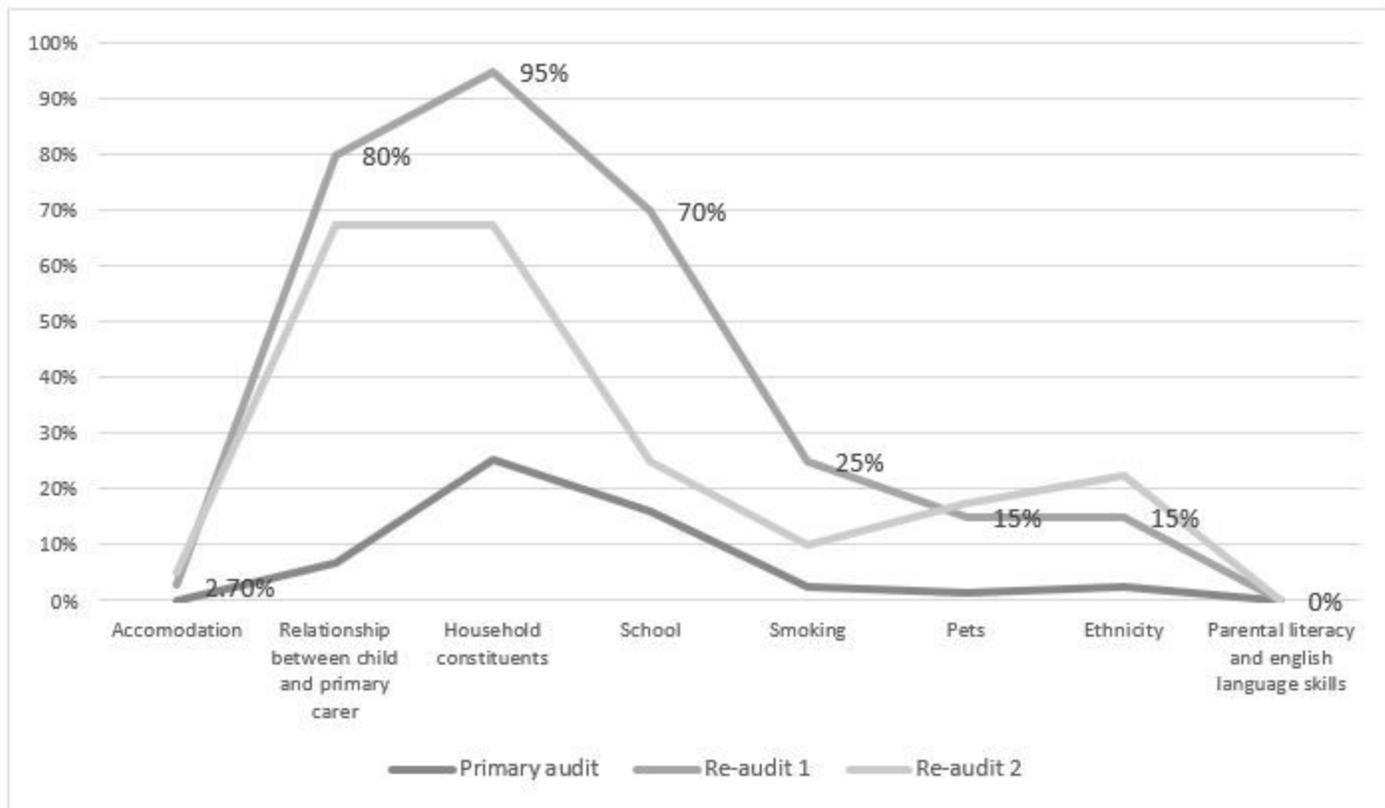


Figure 6

Constituents of social history as documented in primary audit and re-audits I and II.