

RECORDING A HISTORY OF ALCOHOL USE IN PREGNANCY: AN AUDIT OF THE KNOWLEDGE, ATTITUDES AND PRACTICE AT A CHILD DEVELOPMENT SERVICE

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ABSTRACT

Aims

To assess the effectiveness of alcohol documentation, examining medical correspondence and medical files of patients referred to the State Child Development Service (SCDS) and (ii) To measure the knowledge, attitudes and clinical practice of health practitioners working at the child development service (CDS) in relation to asking about alcohol use in pregnancy.

Methods

Written documentation for children attending the State Child Development Centre (SCDC) in Western Australia were examined for documentation of alcohol use during pregnancy; a random sample of 40 medical records were examined and all correspondence authored by every paediatrician for the calendar year 2006 (n=210) were reviewed. (ii) A survey was completed of staff at the CDS, to assess their knowledge, attitudes, and clinical practice and their perceived importance of asking about alcohol and other drug use.

Results

Review of all written documentation, of both files and paediatric correspondence, found only three letters recording alcohol use in pregnancy; two of the letters recorded the index child displaying stigmata consistent with prenatal alcohol exposure, yet Fetal Alcohol Spectrum Disorders (FASD) were not considered within the concluding differential diagnoses. 56% of responding CDS staff (73% response) agreed it was important to ask about alcohol use when taking a pregnancy history, 20% indicated they routinely asked about alcohol exposure and 35% of staff said they never asked about alcohol use. 60% of the CDS staff completing the survey would welcome a proven technique to ask about alcohol use.

Conclusions

There is a gap in clinical practice within this CDS in asking and/or recording information about alcohol use in pregnancy. The majority of CDS staff who completed the survey agreed that asking about alcohol use in pregnancy was important and welcomed a proven technique to do so.

Key Words: *Prenatal alcohol exposure, fetal alcohol spectrum disorders (FASD), pregnancy history, differential diagnoses, developmental delays*

Alcohol is a teratogen¹; there is no known safe level of alcohol consumption in pregnancy. The most recent Australian guidelines released by the National Health and Medical Research Council (NHMRC) recommend abstinence from consuming alcohol as the safest choice when considering becoming pregnant or when actually pregnant.² Prenatal alcohol exposure is linked to significant, permanent and pervasive developmental disorders and birth defects.³ In a recent survey of health professionals (Aboriginal health workers, child and community health nurses, allied health professionals, general practitioners, and obstetricians) in Western Australia (WA), 33% of these health professionals thought it was difficult to ask pregnant women about alcohol intake and 53% thought a diagnosis of Fetal Alcohol Syndrome (FAS) could stigmatise a family.⁴ A similar survey of WA paediatricians found that 53% thought it was difficult to ask about pregnant women about their alcohol intake and 70% agreed that a diagnosis of FAS may lead to stigmatisation.⁶

In response to these findings and in recognition that children affected by fetal alcohol exposure would likely be seen at a child developmental clinic, we undertook a collaborative project with the State Child Development Centre (SCDC), to examine current knowledge, attitudes and clinical practice of staff within the Centre. The SCDC is a centrally located Child Development Service, (CDS) in the capital city of Western Australia (WA) attending the developmental needs of clients from its catchment area and offering consultation to regional areas outside of the city.

Objectives

- 1) To assess the effectiveness of alcohol documentation, examining medical correspondence and medical files of patients referred to the State Child Development Service (SCDS) in Western Australia.
- 2) To measure the knowledge, attitudes and clinical practice of health practitioners working at the Child Development Service (CDS) in relation to asking about alcohol use in pregnancy.

Ethics Approval

Approval for the study was granted by the Ethics Committee of the Princess Margaret Hospital

(PMH) for Children (Registration Number 1560/EP) and the Princess Margaret Hospital Clinical Care Unit (PMCCU) QI Committee through Governance, Evidence, Knowledge and Outcomes (GEKO) committee of PMH (Audit 69QP).

METHODS

(a) Research Design

The research methods utilised both audit and survey to retrieve data. Written documentation including medical files and medical correspondence were audited for notation about prenatal alcohol use and all staff of the CDS were surveyed about their knowledge, attitudes and clinical practices around FASD.

The CDS participating in this study is the central child development service of the capital city of Western Australia (WA). The CDS provides developmental assessments for local metropolitan children and consultation for remote and regional clients. Any type of developmental issue found among clients from infant age to adolescence can be referred to a CDS in WA. Every CDS aims to provide a tertiary clinical service, exploring aetiologies and differential diagnoses for presenting difficulties, and develop individualised management and prevention plans. Information was gathered from two sources.

- 1) Written documentation was examined for notation regarding alcohol and
- 2) Staff completed a survey of their knowledge, attitude and practice around FASD.

Firstly, written documentation was examined. All correspondence from a single calendar year and authored by paediatricians of the CDS, was searched electronically for notation concerning alcohol. Secondly, forty medical files were randomly selected and manually examined for any notation concerning alcohol. All electronic and paper documentation was examined by a single research paediatrician.

(1)(a) All correspondence authored by paediatricians of the CDS, from one calendar year (2006), was retrieved electronically. The correspondence was searched electronically for the root-term "alcohol" The correspondence was predominantly clinical summaries about new clients, listing known diagnoses, reasons for

referral, differential diagnoses, and immediate management plans. These clinical summaries were sent to the referring doctor.

(1)(b) Forty medical files were randomly selected and examined, from cover-to-cover, for any notation concerning alcohol. The random list for the forty files was automatically generated by the database co-ordinator of the CDS. Twenty of the medical files were of children principally cared for by paediatricians of the CDS, the remaining files were for children primarily cared for by allied health practitioners of the CDS. Medical files of the CDS contain generic demographic data, and the referral forms prompted collection of data about parity and smoking exposures, and space for notation around reasons for referral.

(2) All staff of the CDS were sent a survey by electronic mail. The survey sought information about their knowledge, attitudes and clinical practice (KAP) around questioning clients on alcohol and other drug use and their attitudes to obtaining a pregnancy history. Perceptions about current workload and time constraints were also explored. A covering letter from the director of the CDS (JW) assured staff that the survey was voluntary and that the results would be confidential and de-identified. The survey was also accompanied by a front page information sheet repeating confidentiality and the voluntary nature of the survey. The survey contained a variety of question formats including categorical options for demographic data, multiple choice options and Likert scales to explore detail of KAP; there was also space for qualitative comments. The Likert scale offered a range of five options from strongly agree, sometimes agree, not sure, sometimes disagree and strongly disagree.

All data were de-identified and entered into a data file and analysed using SPSS 15 for Windows. Data were explored utilizing quantitative analyses of frequencies and percentages, allowing for descriptive summaries.

RESULTS

(1) Written Documentation

(1)(a) Paediatricians' correspondence

From the 210 letters authored by paediatricians of the CDS during one calendar year (2006), 30 letters were found to contain the root-term "alcohol". 9 letters recorded alcohol use by the client's mother but *outside* of the respective pregnancy for the index case, and only 3 letters recorded alcohol use during the respective pregnancy. The remaining correspondence explored consumption of alcohol by the index client, and family context of alcohol use. Two of the 3 letters recording in-utero alcohol exposure of the client, also recorded observations of abnormal physical stigmata common to children exposed to alcohol in-utero; one child had dysmorphic facial features and the other child had impaired growth; yet a FASD was not considered within the differential diagnoses for either child.

(1)(b) Medical files

Of the 40 medical records audited, half were children referred to CDS as part of routine scheduled follow-up of their premature birth from the Neonatal Intensive Care Unit (NICU). The other 20 files were for children referred from the community health nurses.

The NICU employs computer-generated discharge summaries and these discharge summaries are accepted as sufficient letters of referral by the CDS and no other standardized form is required. In contrast, Child and Community Health Nurses (CCHN) manually complete a standardized referral form. Children referred as graduates from the NICU were first seen by a paediatrician at the CDS, whilst children referred by a community health nurse were first reviewed by an allied health professional of the CDS.

One of the medical records contained the word alcohol, listed as a pre-existing diagnosis for the mother of a child referred to CDS from NICU; there were no other details provided. The medical histories listed in the discharge summaries from NICU, pertain to the post-natal events of the index child, whilst any reference to maternal morbidities describe pre- and peri-natal health whilst pregnant with the index child. Standard questions are not asked of all women whose children were in the NICU, and any questions regarding maternal health is at the discretion of the attending doctor.

On the child and community health nurses' standardised referral form, the most common reason recorded in the space for the clinical issue prompting referral was delayed or abnormal motor or speech skills. Additional information requested on the standardised referral form, such as gravidity, parity and smoking history were rarely completed. The CCHN standardised forms did not provide an option for recording prenatal alcohol or other drug use.

(3) Survey of the knowledge, attitudes and clinical practice of CDS staff

Of the 40 CDS staff surveyed, 29 (73%) returned a completed questionnaire. Nineteen (19) of the staff had worked in the CDS for 7 or more years and 21 of the staff currently worked 3 or more days each week. Surveys were returned from paediatricians, nurses, physiotherapists, occupational therapists, speech and language therapists, audiologists, social workers and psychologists. 90% of respondents were female.

From the survey, staff reported that they always reviewed the medical history provided in the referral letter but did not always review any pre-existing medical notes; 16 staff always read the pre-existing medical notes; 10 sometimes did so and 3 responded that they never read the medical notes. 65% reported that they always questioned the parent or carer to obtain a medical history for the index child but 31% reported only sometimes questioning the parent or carer to obtain a medical history. Pregnancy histories were usually not obtained through questioning. Only 14% always asked questions about the pregnancy history and 28% sometimes asked pregnancy history questions; 30% reported that they always read the medical records and 48% reported sometimes reading the medical records to find out the pregnancy history.

Staff were asked about the importance of taking a pregnancy history, 76% of staff considered that all health professional should complete a pregnancy history. Staff were asked about availability of time for taking a pregnancy history; 38% said they always had time to take a pregnancy history and 31% said they sometimes had time to take a pregnancy history.

Staffs were also asked to review a list of issues which they may ask about when taking a pregnancy history (Table 1) and to circle the items

they considered important. Place of birth of the index child, socio-economic status and educational level of the parent were considered important by approximately 40% of staff. Fewer than a third of staff considered it important to ask questions about maternal drug and alcohol use and smoking in pregnancy. The survey asked staff to consider their practices as: always important, sometimes important or never important to ask about smoking, alcohol and recreational drug use during pregnancy. 55% of the CDS staff thought it was never important to ask about smoking exposure in pregnancy, 45% thought it was never important to ask about recreational drug exposure in pregnancy and 48% thought it was never important to ask about alcohol exposure in pregnancy. Staff were then asked to consider questions about smoking, recreational drug use and alcohol, but this time on a five-point Likert scale; from strongly agree to strongly disagree; the results are listed in Table 2. A total of 23 staff (79%) either agreed (n=11) or strongly agreed (n=12) that; it was important to ask about alcohol use and recreational drug use. Fewer (n=15) agreed that it was important to ask about smoking. Similar numbers of staff agreed or strongly agreed that asking such questions may impair their relationship with the parent or guardian (12 for smoking; 12 for recreational drugs, 13 for alcohol) and make parents feel judged (20 for smoking; 18 each for recreational drugs and alcohol). Similar numbers of staff also agreed or strongly agreed that they were confident in asking about smoking (n=13), recreational drugs (n=14) and alcohol (n=12). 65% CDS staff considered questions about alcohol and other drug use may disrupt a positive client relationship.

There was no clear indication that staff thought alcohol questions should be asked only by a doctor (Table 3). Most staff did not agree that it would be stressful if they were required to ask prescribed alcohol questions and most (n=24) would welcome a proven technique to ask about alcohol. The majority of CDS staff disagreed that they had no time to ask additional questions in their clinical practice and almost all of them (n=24) stated that they had time for three extra questions.

DISCUSSION

This study of clinical practice at a CDS found inconsistent recording of pregnancy histories and infrequent recording of information about in-utero exposure to alcohol and other substances. Detailed pregnancy histories and any information about in-utero exposure exposures to alcohol and other drugs were rarely recorded in the audited medical files, medical letters or referral information. In the audited records of NICU graduates, there was no emphasis on any potential prenatal contribution to their postnatal development.

Deciphering the aetiology and trajectory of developmental anomalies should include questions about in-utero exposures to harmful or teratogenic substances and the majority of staff surveyed agreed that asking about drug, smoking and alcohol use was important. However, many staff feared that the questions would impair their relationship with the parent or guardian of their client and may make the parent feel judged - findings in keeping with those from other recent surveys of health professionals in WA.^{5,6} Although about half the staff surveyed agreed that they felt confident to ask about alcohol, smoking and recreational drug use, such questioning was rarely recorded in the medical notes or letters.

The lack of consideration of prenatal alcohol exposure as a contributor to developmental disorders is well-documented – FAS is known to be under-diagnosed in Australia⁷, only a small

proportion of health professionals know the essential diagnostic features of FAS and most do not routinely ask or advise about alcohol use in pregnancy.^{5,6}

Despite their misgivings about possible parental judgement and impairment of client-staff relationship, the staff overwhelmingly expressed a willingness to have a proven technique to ask about alcohol use and to include at least three more questions in their clinical repertoire. Initiatives are underway to address the findings from this study. A new electronic clinical and medical record system has been installed across all child development services allowing systematic recording of clinical care and includes several questions on alcohol and other substance exposures during pregnancy. Staff are to be offered training in asking questions about alcohol consumption utilising, “Alcohol and Pregnancy and Fetal Alcohol Spectrum Disorder: a Resource for Health Professionals⁵ which supports use of the AUDIT-C^{6,7} and is in line with similar guides.^{8,9} Additionally, all developmental paediatricians pursued training in the University of Washington FASD 4-Digit Diagnostic Code.¹⁰

It is expected that these initiatives will increase awareness of the need to ask and record information on exposure to alcohol and other drugs and to consider them as potential causes of or contributors to the child’s developmental delay. We plan to repeat the study in 12 months to evaluate the impact of these initiatives.

TABLE 1 Factors Considered Important when Retrieving a History of Pregnancy

QUESTION	PERCENTAGE (N=29)	QUESTION	PERCENTAGE (N=29)
Gestation	86 (25)	Previous miscarriages	31 (9)
Mode of birth	79 (23)	Antidepressant use	31 (9)
Family history	72 (21)	Psycho-active drugs	28 (8)
NICU stay	66 (19)	Alcohol exposure	28 (8)
Previous pregnancies	59 (17)	Father’s age	24 (7)
APGAR	45 (13)	Smoking exposure	21 (6)
Place of birth of child	45 (13)	Complimentary meds	17 (5)
Educational level of parents	41 (12)	Exercise in pregnancy	7 (2)
Socioeconomic status of parent(s)?	38 (11)	Folic acid	7 (2)
Mother’s age	35 (10)	Diet when pregnant	3 (1)
Mother’s ethnicity	31 (9)	Father’s religion	3 (1)
Father’s ethnicity	31 (9)	Mother’s religion	3 (1)

TABLE 2 Attitudes and Clinical Practice

LIKERT SCALE OF KNOWLEDGE, ATTITUDES AND PRACTICE (N = 29)	STRONGLY AGREE	TEND TO AGREE	NOT SURE	TEND TO DISAGREE	STRONGLY DISAGREE
It is important to ask about smoking	9	6	9	3	-
I am confident to ask about smoking	5	8	3	7	3
Smoking questions make parents feel uncomfortable	1	16	6	5	-
Smoking questions impairs the relationship with parents	1	11	5	10	1
Smoking questions make parents feel judged	2	18	4	4	-
It is important to ask about recreational drug use	12	11	5	-	-
I am confident to ask about recreational drug use	7	7	3	9	2
Recreational drug questions make parents feel uncomfortable	20	5	3	-	-
Recreational drug questions impairs relationship	1	11	7	9	-
Recreational drug questions make parents feel judged	1	17	6	4	-
Recreational drug questions make parents feel blamed	3	15	7	2	-
It is important to ask about alcohol use	12	11	5	-	-
I am confident to ask about alcohol use	8	4	3	10	3
Alcohol use questions make parents feel uncomfortable	3	16	5	5	-
Alcohol use questions impairs the relationship with parents	3	10	7	8	1
Alcohol use questions make parents feel judged	2	16	7	3	-
Alcohol use questions make parent feel blamed	4	17	4	3	-

TABLE 3 Attitudes About Implementing Questions About Alcohol

LIKERT SCALE OF KNOWLEDGE, ATTITUDES AND PRACTICE (N = 29)	STRONGLY AGREE	TEND TO AGREE	NOT SURE	STRONGLY DISAGREE	TEND TO DISAGREE
Alcohol use questions should only be asked by a doctor	-	8	8	3	9
I would be stressed if required to apply prescribed alcohol questions	2	2	7	5	11
I would welcome a proven technique to ask about alcohol	13	11	3	-	1
I have no time for extra questions	-	7	5	2	14
I have time for three extra questions	8	16	2	-	1

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