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Research Article

## A STUDY ON PREVALENCE OF DISCHARGE AGAINST MEDICAL ADVICE IN A TERTIARY CARE HOSPITAL IN NIGERIA

\*Onankpa BO<sup>1</sup>, Ali T<sup>2</sup>, Abolodje E<sup>2</sup>

<sup>1</sup>Senior Lecturer/ Consultant Paediatrician, Department of Paediatrics, Usmanu Danfodiyo University Teaching Hospital, PMB 2370, Sokoto, Sokoto State, Nigeria.

<sup>2</sup>Senior Registrar, Department of Paediatrics, Usmanu Danfodiyo University Teaching Hospital, PMB 2370, Sokoto, Sokoto State, Nigeria.

\*Corresponding author email: benonankpa@yahoo.com.

### ABSTRACT

**Background:** The length of hospital stay for every neonate admitted for care is more often than not at the mercy of the parents/caregivers. **Aims:** To determine the pattern of request for discharge against medical advice of neonates. **Methodology:** A 5-year cross-sectional study at the Special Care Baby Unit (SCBU) of Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto, Nigeria. All babies that were discharged against medical advice (DAMA) between January, 2008 and December, 2012 were recruited. Both baby/maternal information and the indications for the discharge were documented. Statistical analysis was done using SPSS version 20.0 **Results:** Admission to SCBU for the period was found to be 2,426 (20.2%). Forty two (1.7%) babies were DAMA; males 17 (40.5%), females 25 (59.5%); M: F; 0.7:1.5. Twenty seven (64%) delivered in UDUTH, 15 (36%) outside the facility. Birth weights ranged from 1.0 – 4.8kg with mean SD of 3.03 ± 0.8. 36 (85.7%) were spontaneous vertex deliveries, and term babies accounted for 78.6%. Babies delivered vaginally had more DAMA. Birth asphyxia was the commonest diagnosis. The mean duration of hospital stay was 8.2 ± 5.4 days. Nineteen babies (45.2%) were DAMA in the first 8 days of admission, majority of these were from the low and middle income groups. Four neonates (9.5%) were re-admitted. The commonest reason for DAMA was financed (45.2%) and father was the main signatory to the DAMA (92.9%). **Conclusions:** Discharge against medical advice remains a paediatric problem in the study area despite adequate counselling.

**Keywords:** Discharge against medical advice, Tertiary hospital, Nigeria

### INTRODUCTION

Medical practitioners and more worrisome, paediatricians are likely to face the challenge of parents asking for discharge against medical advice (DAMA) of their wards. It might be impossible to eliminate because the length of hospital stay in children depends on their parent(s) or caregivers.<sup>1,2</sup> Discharge against medical advice is still a major health concern in health care delivery in Nigeria.<sup>3</sup> There is a high rate of readmission with subsequent longer stay in hospital amongst babies DAMA.<sup>4-6</sup>

Concerning DAMA, children are not part of the decision making, and parents of neonates contribute more to DAMA.<sup>3,7-9</sup> The Millennium Development Goal report for 2008 feared that achieving goal number 4 may be negatively affected by DAMA.<sup>10</sup> Common reasons for DAMA include financial constraints, parents' perception that the child is well, disruption of family activities, poor clinical outcome, option of traditional medication, and hopeless perception of the clinical status.<sup>4,11</sup>

Access to quality medical care, especially in the public sector is still poor in low-resource settings of many African countries, including Nigeria, and due to the harsh economic situations amongst other reasons, parents frequently ask for DAMA.

In this study, we therefore, looked at the prevalence of this problem and the possible causes of discharge against medical advice at UDUTH, Sokoto, Nigeria.

## METHODOLOGY

Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria, serves as the referral centre to three of its neighbouring States and Niger republic. The study was a 5-year cross-sectional, retrospective study (January 2008 – December 2012) of neonates admitted into our SCBU. The parents/caregivers pay for prepacked drugs/admission packs except for emergency cases that payment is made later. When parents/caregivers insist on discharge despite counselling by the unit consultant and/or the most senior nurse, they are made to sign the discharge form. Parents bare the cost of all treatments in full except those on the National Health Insurance scheme that pay only part of the cost. The following information were obtained from the admission files; gestational age, gender, weight at birth, place of delivery, mode of delivery, ethnicity, admitting diagnosis, length of hospital stay and reason(s) for discharge. The Oyedeji system of classification was used to classify parents into high (classes I and II), middle (class III) and low income groups (classes IV and V).<sup>12</sup> Ethical approval was obtained from the Ethics committee of UDUTH.

Data was manually sorted out for completeness and entered into Microsoft excel spread sheet. The analysis was done using SPSS (statistical package for the social sciences) version 20.0. The results were presented in the form of means, ratio and percentages. The statistical significance was set at  $P < 0.05$ .

## RESULTS

Total deliveries for the study period were 10,578; admitted to SCBU was 2,426, there were 42 cases of DAMA (1.7% prevalence). There were 17 males and 25 females; M: F ratio of 0.7:1.5. Twenty seven (64%) of the babies were delivered in UDUTH while 15 (36%) were born outside the facility. Table I shows the birth characteristics of the babies. Birth

weights ranged from 1.0 – 4.8kg with a mean SD of  $3.03 \pm 0.8$ . Thirty six (85.7%) were spontaneous vertex deliveries, and term babies were the majority 33 (78.6%). Babies delivered vaginally were more likely to DAMA due to early maternal ambulation; the difference when compared to other modes of delivery was not statistically significant ( $p = 0.06$ ).

**Table 1: Birth and gender characteristics of 42 neonates DAMA.**

	Number of neonates	%
<b>Gender</b>		
Male	17	40.5
Female	25	59.5
Total	42	100
<b>Mode of delivery</b>		
SVD	34	80.9
C/s	6	14.3
Other	2	4.8
Total	42	100
<b>Gestational age (weeks)</b>		
28-32	2	4.8
33<37	6	14.3
38-42	33	78.6
>42	1	2.3
Total	42	100
<b>Age on admission</b>		
24 hours	32	76.2
2-7 days	18	42.9
>7 days	2	4.8
Total	42	100

**SVD** = spontaneous vertex delivery, **C/s** = Caesarean section

Table 2 depicts the duration of hospitalization prior to DAMA and socioeconomic class of the parents. The mean length of Hospital admission was  $8.2 \pm 5.4$  days. Nineteen babies (45.2%) were DAMA in the first 8 days of admission; all from low-in-come groups. Thirty seven babies (88.1%) were in the low and middle income class; DAMA were observed more in this group ( $p < 0.015$ ). Four neonates (9.5%) were re-admitted within 72 hours after DAMA; all from the high income group. For the re-admitted cases, the observed complications included severe dehydration in three babies and one baby with severe anaemia

**Table 2: Duration of hospitalization prior to DAMA and socio-economic class of parents**

	Number of neonates	Percentage
<b>Duration of hospitalization (days)</b>		
1	2	4.8
2-7	8	19.1
8-14	28	66.7
>14	4	9.5
Total	42	100
<b>Social-economic class of parents*</b>		
Upper	5	11.9
Middle	14	33.3
Lower	23	54.8
Total	42	100

P=0.015

Birth asphyxia, neonatal sepsis, and low birth weight accounted for most DAMA (Table 3). Eight babies, all females had multiple morbidities.

**Table 3: Clinical diagnosis of 42 neonates DAMA**

Clinical Diagnosis	Number of neonates	% of Total
Perinatal asphyxia	22	52.4
Neonatal septicaemia/sepsis	11	26.1
Low birth weight	5	11.9
Neonatal jaundice	1	2.4
Small-for-gestational age	1	2.4
Respiratory distress syndrome	1	2.4
Hemolytic disease of the newborn	1	2.4
Total	42	100

**Table 4: Reasons given by parents/caregivers for neonates DAMA**

Reason(s)	Number of neonates	% of Total
Lack of finance	19	45.2
Perceived improvement	9	21.4
To seek traditional medication	4	9.6
No improvement	3	7.1
Distance too far	2	4.8
Elsewhere	2	4.8
Multiple *	3	7.1
Total	42	100

\*More than one reason for DAMA

Table 4 shows the reasons for DAMA amongst the study subjects. Poor financial stand of parents was the commonest reason for DAMA (45.2%) and the father was the main signatory (92.9%).

## DISCUSSION

The prevalence was 1.7% for DAMA in the studied neonates. This was similar to other previous studies from Nigeria for DAMA though, in general Paediatrics.<sup>1,4</sup> A prevalence of 1.6% was also reported in neonates studied in Saudi Arabia.<sup>2</sup> We therefore assume that neonates are still at the risk for DAMA in most centres. However, a higher prevalence of 4.3% was reported in a study from Nigeria<sup>3</sup> and 12.2% in a study from a teaching hospital in North Western Ethiopia.<sup>13</sup> These differences, we attributed to the many factors that influence DAMA including gestational age, socioeconomic class, ethnicity, cultural issues amongst others.<sup>2,14</sup> Facts from the literature has put the prevalence of DAMA to be between 1% and 6% globally;<sup>1,15</sup> In these studies, finance and clinical outcome were considered as strong factors in taking the decision for DAMA in poor resource centers.<sup>1,3,13</sup> In Nigeria, prevalence is often affected by finance as health care to a large extent is provided by parents. However, this factor (finance) was not considered an issue in most studies outside Nigeria.<sup>2,5,7</sup>

Babies born outside the study facility accounted for 64.3%, this was comparable to findings observed in similar studies from southern Nigeria.<sup>3,4</sup> Parents/caregivers of referred babies from peripheral hospitals might have exhausted their finances, and most importantly such babies will be very ill therefore making DAMA in this group a frequent occurrence.

Parents with term and bigger babies are more likely to ask for DAMA more than those with small pre-term babies as postulated in other studies.<sup>2,3</sup> It was observed in this study that DAMA was highest for babies delivered vaginally; their mothers probably had earlier ambulation, and discharged earlier than those who had caesarean sections.

Life threatening conditions like perinatal asphyxia, neonatal septicaemia/sepsis and low birth weight/prematurity were the most prevalent diagnosis among babies discharged AMA. This agreed with

facts from the literature.<sup>3,16</sup> Previous Nigerian studies have also observed these conditions,<sup>2,3</sup> and by WHO were identified as the greatest cause of mortality in newborns in the developing world.<sup>17</sup>

Nineteen babies (45.2%) were discharged within the first week of life while, most DAMA (65.8%) occurred after the first week of hospital admission. It has been observed that patients that were discharged AMA have higher rates of re-admission with longer stay in the hospital, and poor clinical outcome<sup>18, 19,20</sup> The readmission rate in our study was low, only four babies (1.7%) were re-admitted. This figure is low compared to the value (16.2%) reported from Benin City,<sup>1</sup> but, similar to the reported from Port Harcourt, all in Nigeria.<sup>3</sup> These differences might be due to finance and perception of parents. Some of the newborns in this study that required re-admission may have been readmitted into other wards due to age factor (babies older than 28 days are not admitted into our SCBU). In most cases, parents/caregivers are faced with issues like disfranchise, fear of reproach from health workers, and thus are discouraged from returning to hospital for re-admission. Discharge AMA was more frequent amongst patients in the low income class (45.2%). Outside this major factor for DAMA in this study, others included falsely perceived clinical improvement of babies by parents and opting for traditional medication. Fathers (92.9%) were the main signatory to the discharge form, this is similar to an earlier work in a Nigeria study.<sup>1</sup> Issues of gate-keeping by fathers in the study area is also a big factor in decision making concerning DAMA; many mothers do not work outside their homes and some cannot take such decisions.

Parents spend an average of N10, 850 (80 Dollars) per week for treatment in our SCBU outside other logistics, the cost implications are, therefore, definitely not within the reach of most parents who are not on National Health Insurance Scheme (NHIS).

## CONCLUSION

The major contributory factors to DAMA in the study were poverty, perceived improvement and other multiple social problems making DAMA in neonates still is a serious public health issue with resultant increase in morbidity and mortality.

**Recommendations:** Physicians, specifically paediatricians, are often torn between wishes of the parents/caregivers asking for DAMA and what is best for the patient despite keeping legal issues at view. It is, therefore, important for health care providers to include ethical, legal and moral issues in the management of patients especially in dealing with cases of DAMA. There is also the need to improve female education and empower women so that mothers can contribute to decision making concerning the health of their wards, and also to poverty alleviation.

**Conflict of interest:** None

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