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## ATTITUDE AND PRACTICE OF HEALTH CARE PROVIDERS TOWARDS AUTOPSIES IN CHILDREN UNDER FIVE YEARS AT KENYATTA NATIONAL HOSPITAL

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## ATTITUDE AND PRACTICE OF HEALTH CARE PROVIDERS TOWARDS AUTOPSIES IN CHILDREN UNDER FIVE YEARS AT KENYATTA NATIONAL HOSPITAL

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### ABSTRACT

**Background:** Attitude and practice of health care professionals toward autopsy are important as they will give information regarding factors that contribute to the low rate of autopsies in children under five years.

**Objective:** To evaluate the attitude and practice of health care providers towards autopsies in children under five years.

**Design:** Cross-sectional hospital based descriptive survey.

**Setting:** General paediatrics wards and newborn unit at Kenyatta National Hospital, Nairobi, Kenya.

**Subjects:** Health care providers working at the Kenyatta National Hospital paediatric wards and newborn unit.

**Results:** The study enrolled 95 health care providers. Majority (69.5%) of health care providers showed a positive attitude towards autopsy. Consultants and paediatric residents had a more positive attitude compared to interns ( $p < 0.001$ ) and nurses ( $p = 0.011$ ). Clinical experience of  $>15$  years was associated with a more positive attitude. The main barriers to obtaining consent were lack of formal training in obtaining consent and failure of autopsy results to be availed in a timely manner.

**Conclusions:** Health care providers had a positive attitude to autopsy which was significantly associated with their cadre and years of experience. The main reasons given for not obtaining consent for autopsy were lack of formal training in obtaining consent and failure to obtain autopsy results in timely manner.

### INTRODUCTION

The term autopsy refers to the systemic examination of a dead body for medical, legal and scientific purposes. An autopsy is a powerful tool in assisting families cope with the grieving process and in counselling them regarding future pregnancies. Autopsies also generate accurate vital statistics, provide pathological descriptions of new diseases, and offer powerful tools for education and quality assurance (1, 2).

Presently the autopsy is the accepted gold standard for determination of cause of death (1).

Despite the crucial role that autopsy plays in the development of the science and practice of medicine, autopsy rates have been declining throughout the world in recent decades (3). There are few studies on attitude towards autopsy from Africa where

clinical autopsy rates have also been on the decline (4). Attitudes and practices of health care providers toward autopsy have not been well studied.

In Kenya no studies have been done to ascertain the reasons for the low rates of autopsies in children. Clinicians' attitude and practice toward the autopsy are critical factors in determining whether an autopsy will be requested and if permission will be obtained.

The objective of this study was to determine the attitude and practice of health care providers towards autopsies in children under five years of age.

### MATERIALS AND METHODS

This was a cross-sectional hospital based descriptive study utilising qualitative methods of data collection. The study population were health care providers

working at the paediatric wards and newborn unit of Kenyatta National Hospital, Kenya's leading referral health facility.

Health care providers working in the newborn unit and paediatric wards were identified and asked to participate in the study. Those who agreed signed written consent and were then given a questionnaire which they filled.

The self administered questionnaire sought to establish the following details:

- HCPs experience as regards autopsy
- Attitude towards autopsy (measured using the Likert scale).
- A positive attitude was indicated if one agreed or strongly agreed that autopsies are capable of providing relevant findings that could change future clinical practice, as well disagreed or strongly disagreed that current diagnostic procedures are so accurate that there is little need for autopsies.

Data collected were entered into a database designed in MS Access. During the design of the database, range checks and entry options (implemented using drop downs and tick boxes) were included so as to reduce errors during data entry. The data were then verified and cleaned. Any inconsistencies noted during data cleaning were corrected by referring back to the original questionnaires. Data were then transferred to SPSS (version 17) for analysis. Univariate description of each variable in the dataset was conducted using SPSS procedures for calculating means (SD) and medians (ranges) for continuous variables and frequency tables and graphs for categorical variables.

The main study outcomes were estimated as the percentage of health care providers who had counseled parents on autopsy and percentage of those with positive attitude towards autopsy. At the end of the analysis methodological triangulation of data was undertaken to obtain consensus.

## RESULTS

Ninety five health care providers were enrolled in the study. Of the 95 recruited, nurses were a majority making up 48.4% (n=46). Interns, Paediatric residents and Paediatric consultants accounted for 21.1, 20.0

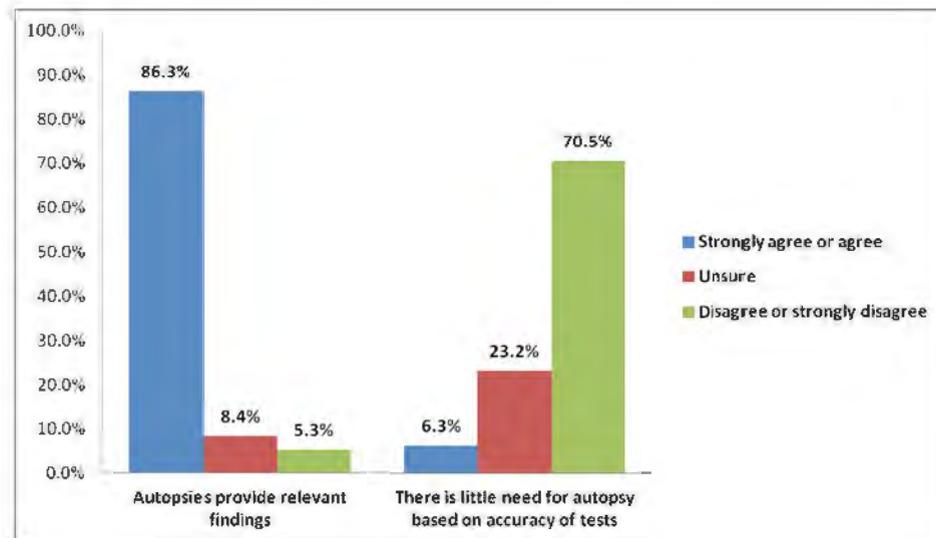
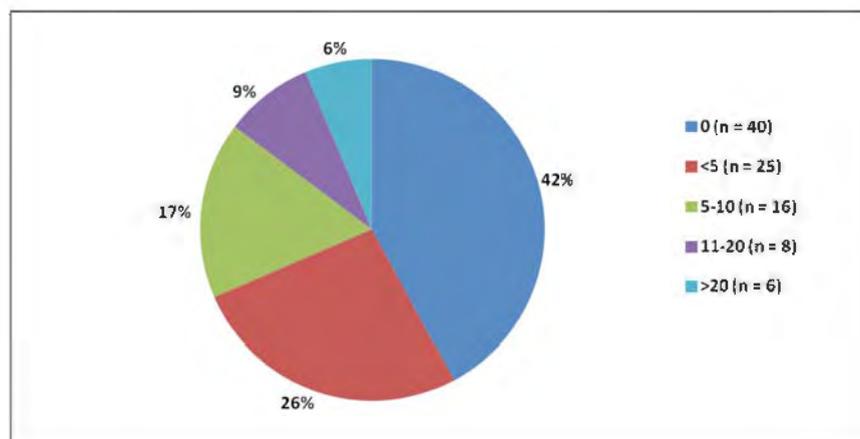
and 10.5%, respectively. Most of the participants had worked for less than 15 years since graduating. Most respondent agreed or strongly agreed that autopsy findings were relevant for practice. On the other hand respondents commonly disagreed or strongly disagreed that current diagnostic procedures are so accurate that there is little need for autopsies. Overall, based on the response to these two statements a total of 66 (69.5%) health care providers showed a positive attitude towards autopsy (Figure 1).

The findings of the Fishers exact test showed that health care providers' attitudes were significantly associated with their cadres. Consultants and paediatric residents (93.1%) had more positive attitudes compared to nurses (67.4)  $p = 0.011$ , and medical or clinical officer interns (40%),  $p < 0.001$ . Clinical experience also showed a significant influence on attitude towards autopsy. Experience of > 15 years was associated with a more positive attitude compared to < 5 years ( $p = 0.002$ ). Reported previous counselling of parents to consent for autopsies also did not influence attitudes towards autopsies ( $p = 0.09$ ) Table 1.

A total of 58 (61.1%) health care providers reported to have ever counseled a parent to consent to an autopsy on their child while 37 (38.9%) had not offered such counselling. Among these 58 who had counseled parents on autopsy, 29 (50%) reported that parents had consented to autopsy on their child following the counselling and the remaining 29 (50.0%) reported that the parents did not consent to autopsy requests.

Most (40, 42%) reported that they had never participated in an autopsy and this finding correlated with the observation that most of the participants in the study were nurses. Approximately one-quarter of the health workers reported that they had participated in less than five autopsies (Figure 2).

Health care providers identified the lack of formal training in obtaining consent and the failure to avail autopsy results in a timely manner as the main barriers to obtaining consent to conduct autopsies. Other common causes were lack of time to counsel parents (15.8%), presumption that such requests would upset grieving parents (15.8%) and also impose additional costs on families (12.6%) Table 2.

**Figure 1***Health care providers' response to two statements used to assess attitude***Figure 2***Number of autopsies that health care providers reported to have participated in***Table 1***Chi square tests for association between positive attitude towards autopsy and health care providers' characteristics*

Respondent characteristic	Attitude towards autopsy		Chi square	P-value
	Negative	Positive		
<b>Cadre</b>				
Consultant/ Paediatric registrar	2(6.9)	27(93.1)	-	Reference
Medical/ clinical officer interns	12(60.0)	8(40.0)	<0.001*	
Nurses	15(32.6)	31(67.4)		0.011*
<b>Experience (years)</b>				
< 5	16(43.2)	21(56.8)	-	Reference
5- 10	5(26.3)	14(73.7)		0.256*
11 - 15	7(38.9)	11(61.1)	0.69	0.76
>15	1(4.8)	20(95.2)		0.002*
<b>Ever counseled parents</b>				
Yes	14(24.1)	44 (75.9)		Reference
No	15(40.5)	22(59.6)	2.87	0.09

\*Fishers exact test

**Table 2**  
*Factors associated with failure to obtain consent*

	Frequency	%
Request will upset the parents	15	15.8
No formal training in obtaining consent	21	22.1
Lack of time to counsel parents	15	15.8
Autopsy results no available in a timely manner	19	20.0
Fear of litigation	1	1.1
Autopsy will delay funeral arrangements	5	5.3
Costly for the family	12	12.6

## DISCUSSION

The autopsy plays a crucial role in the development of the science and practice of medicine. Despite this autopsy rates have been declining throughout the world (3). The reasons for this decline are varied and complex. One of these reasons is the attitude of health care providers towards the autopsy.

Our study sought to describe the attitude and practice of health care providers towards autopsy in children.

In our study 69.5% of health workers showed a positive attitude towards autopsy compared to 31.5% who showed a negative attitude. This finding shows a similar trend to the study by Oluwasola *et al* in which 95% of doctors approved of the practice of autopsy (3).

In our study, attitude was significantly associated with health care providers' cadres: Consultants and paediatric residents had a more positive attitude compared to nurses ( $p=0.011$ ), and medical or clinical officer interns ( $p<0.001$ ). Experience of > 15 years was associated with a more positive attitude compared to < 5 years ( $p = 0.002$ ).

This was similar to studies done in developed countries. Van Mater *et al* looked at physicians' attitudes regarding neonatal autopsy. They found that increased overall importance of autopsy was seen with advancement in staff position as well as experience in requesting for consent. Interns and residents rated the overall importance of neonatal autopsy to be very important in 46% and 50% of cases, respectively, compared with 83% and 82% of ratings from fellows and attending physicians, respectively (5). Hooper *et al* investigated the nature of physician attitudes about autopsy and found that one of the most crucial factors influencing attitudes is the physician's level of experience with autopsy in training and practice. Among other interesting results was that strength of belief in autopsy relevancy correlated significantly with greater prior exposure to the autopsy (6).

Stolman *et al* looked at the attitude of paediatricians and paediatric residents in obtaining

permission for autopsy and found that although 98% agreed that the autopsy provides valuable information, several factors influenced the failure to obtain consent for an autopsy. These were, physician belief that the family felt the body would be desecrated (37%), physician belief that the family would be upset (35%), physician belief that little information would be obtained (18%) and 17% did not ask permission for autopsy if the family was upset (7).

Our study revealed that 61.1% of health care providers reported to have ever counseled a parent to consent to an autopsy request on their child with 50% of the parents counseled consenting.

The main reasons given by health care providers for not obtaining consent for autopsy were lack of formal training in obtaining consent and the failure to obtain autopsy results in timely manner. This is similar to the findings of Oluwasola which found that doctors considered difficulty in obtaining consent from relatives of deceased as the major reason for the decline in the rate of autopsy. Other reasons given included administrative bottlenecks when requesting an autopsy and delay in obtaining the autopsy report (3).

This study was somewhat limited by the fact that it was dependent on the willingness of health care providers to participate in the study. The study was conducted in an urban setting and the views of health care providers in the rural areas/smaller hospitals may be different from their urban counterparts.

In conclusion, healthcare providers had a positive attitude to autopsy which was significantly associated with their cadre and years of experience. Consultants and paediatric residents had a more positive attitude compared to interns and nurses. Clinical experience also showed a significant influence on attitude towards autopsy. The main reasons given for not obtaining consent for autopsy were lack of formal training in obtaining consent and the failure to obtain autopsy results in timely manner.

Health care providers should be trained on how to counsel parents after death of their child as well as

on how to request for an autopsy. Their participation in autopsies should also be encouraged.

Further qualitative and quantitative research, with a larger number of participants, should be performed to further describe health care providers', attitude and practice towards autopsy in our setting.

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