# ORIGINAL ARTICLE - PUBLIC HEALTH

# KAP RELATED TO MEDICALLY CERTIFIED CAUSE OF DEATH FOR DOMICILIARY DEATHS IN RURAL AREAS OF VILLUPURAM DISTRICT, TAMIL NADU, 2022

Abishek S (1), Selvavinayagam T S (1), Porkodi (1)

(1) Directorate of Public Health & Preventive Medicine

## Abstract

BACKGROUND: GGlobally two thirds of annual deaths are not registered and 53.4% deaths occur at home with no properly assigned cause of death. In India, there is almost 53% home deaths and 45% of total registered deaths have no medical attention in 2020. In Tamil Nadu 74 % are home deaths of which 62% contribution is from Village panchayat where the MCCD coverage is 5% in 2020. In Villupuram district 81% are home deaths of which 85% contribution with 0.2% MCCD coverage noted in Village Panchayat during March-May 2022.

OBJECTIVES: To understand the knowledge, attitude and practices from the family members of the deceased, related to non-availability of medically certified cause of death of those who died at home (non-institutional), from 1st March 2022 to 31st May 2022 in the rural areas Villupuram district.

METHODOLOGY: It was a descriptive cross-sectional study in two Taluks (Vikravandi & Vanur) in Villupuram district among any one family member of those who died at home between 1st March 2022 to 31st May 2022. Data collected through semi-structured questionnaire using Health Care Workers (HCW). Proportions would be calculated regarding the knowledge, attitude and practices as responded by the family members of the deceased

RESULTS: We interviewed 525(88%) relatives of the deceased, of which 93 % personnel died at home. Among home deaths 32% have received medical attention 30 days prior to death in which 6% received MCCD. Among the home deaths, it was noted 22% among those died in home was brought to home by against medical advice from hospitals of which 3% received MCCD. Among home deaths 5% received MCCD. The reasons for not attempting death certificate among home deaths were they didn't know about MCCD (72%), the cause of death of the deceased were assumed by the relatives (22%), none of the officials asked MCCD (4%) Others (2%).

CONCLUSION: This study's findings call for community-based awareness programmes to provide a simple, clear and understandable message to reinforce knowledge about MCCD through Health Care Providers to create awareness on importance of population level cause-specific mortality statistics. Targeted training for doctors and Registrars on proper capture of MCCD should be recommended.

KEY WORDS: MCCD non-availability, Home deaths

# **INTRODUCTION**

Every country needs a Cause of Death data for age and sex specific mortality which can be reliable and reproducible to decrease its mortality and to derive policies which can lower the burden (1-5). Globally, two-thirds 38 million of 56 million annual deaths are still not registered (6) and the global deaths occurring at home is around 53.4%(7). The United Nations estimates that the deaths in the Low and Middle Income countries accounts to around 48 million deaths which represents more than 4/5th of the global deaths which is around 56 million, contributes around 59.7% home deaths and do not mostly have a proper diagnosis of Cause of Death (3,7-10). In India the death reporting is 96% and around 53.4% are home deaths (7,11). The Medically certified deaths is 22% to total registered deaths while the coverage of medical certification among home deaths is not known, the known factor is that 45% had no medical attention during death in India in 2020. In Tamil Nadu there is 100% registration of deaths of which home deaths contributes to 74% in 2020. Among home deaths the Village Panchayat contribute the highest number of deaths 62%, in contrast to which it has the lowest MCCD coverage of 5%. 19 districts had nil MCCD coverage in Village Panchayat in 2020 in which Villupuram is one of the district. In Villupuram district 81% were home deaths of which 85% contribution with 0.2% MCCD coverage noted in Village Panchayat during March-May 2022 (12).

# **OBJECTIVE**

To understand the knowledge, attitude and practices from the family members of the deceased, related to non-



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Corresponding Author : Abishek S e-mail: abishekstanislausuhc@gmail.com availability of medically certified cause of death of those who died at home (non-institutional), from 1st March 2022 to 31st May 2022 in the rural areas Villupuram district.

# **METHODOLOGY**

**STUDY DESIGN**: Descriptive cross-sectional study **STUDY DURATION**: 1st March 2022 to 31st May 2022

**STUDY AREA**: Two taluks (Vanur & Vikravandi) with highest number of deaths per lakh population of Villupuram district were selected.

**STUDY POPULATION**: Any relative of the deceased in two taluks from the study area during the study period was taken (Vanur & Vikravandi) of Villupuram district.

**SAMPLE SIZE**: All the deceased from the Village Panchayat of two taluks (Vanur & Vikravandi) registered in CRS were taken for the study. The sample taken was 591.

**DATA COLLECTION**: The data was collected using a pre tested semi-structured questionnaire. The HCWs are given a half day training on data collection using the questionnaire and also trained on the basics of CRVS. The line list of the deceased is taken and randomly each HCW is assigned for administration of the questionnaire to the family members of the deceased. The responses are recorded as hard copy.

**DATA ANALYSIS:** Data was entered in MS EXCEL by the Data Entry Operator (SBHI), Villupuram district and analysed by calculating proportions regarding the knowledge, attitude and practices as responded by the family members of the deceased.

## **RESULTS**

We interviewed 525(89%) relatives of the deceased, remaining 66(11%) were not available in their residence. Of the interviewed personnel we came to know that deceased were 309 (59%) male and 216 (41%) female. 417 (79%) deceased personnel were above 55 years. 490 (93 %) personnel died at home & 13 (2.5%) died at hospital.

Among the 490 persons died at home 155 (32%) have received medical attention in which 113(73%) had received medical attention in government facility, 41(26%) had received medical attention in private facility prior and 1(1%) person had received medical attention in a pharmacy prior to death in the last 30 days. Only 9 (6%) received MCCD among persons died at home who have received medical attention 30 days prior to death.

Among home deaths, it was noted 109 (22%) was brought to home by against medical advice from hospitals of which 81(74%) were from government hospitals and 28(26%) were from private hospitals. Only 3 (3%) received

MCCD among persons died at home who have been brought against medical advice.

Table 1: Frequency of socio-demographic characters

Variable		Frequency
Demography	Vanur	235(45.3%)
	Vikravandi	287(54.7%)
	0-15	6(1.1%)
Age distribution (In	16-35	19(3.6%)
Years)	36-54	83(15.8%)
	Above 55	417(79.4%)
Gender of Deceased	Male	309(58.9%)
	Female	216(41.1%)
Deceased - Place of Death	Home	490(93.3%)
	Hospital	13(2.5)
	Others	22(4.2%)

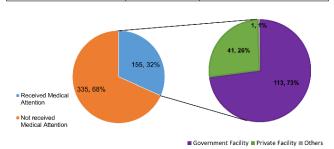


Figure 1 : Personnel received Medical Attention prior to death in last 30 days n=490

Figure.2: Personnel died after being brought against medical advice n=490

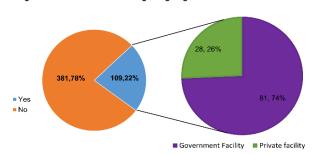


Figure 2 : Personnel died after being brought against medical advice n=490

Among home deaths 22(5%) were seeking MCCD, and succeeded in receiving the certificate. It was noted that 15 (68%) got MCCD because they were requested by VAO. The reasons for not attempting death certificate among home deaths (n=468) were they didn't know about MCCD 339(72%), the cause of death of the deceased were assumed

by the relatives 105(22%), none of the officials asked MCCD 17 (4%) Others 7 (2%).

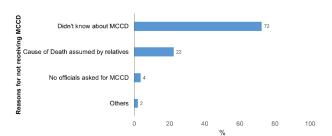


Figure 3: Reasons for not receiving MCCD certificate

#### **DISCUSSION**

In India 28.0% of the total registered deaths alone have received medical attention in institutions (11). The noninstitutional deaths being the highest contributor has low MCCD coverage. In Tamil Nadu Village Panchayat has the highest number of deaths and least MCCD coverage (12). In view of the lower frequency of reporting of MCCD among home deaths in Village panchayats which contributes a major part in Tamil Nadu, we did a study and assessed the Knowledge, attitude and practices related to non-availability of medically certified cause of death of those who died at home (non-institutional), from the family members of the deceased. It was noted in the study that 93 % died at home in Village Panchayats. The deaths as per records were noninstitutional deaths, but during study it was noted that 13 deaths were from hospital and it has been captured as noninstitutional deaths.

Among home deaths 155(32%) have received medical attention prior to thirty days while most of it is from government institutions 113(73%), but 94 % did not receive MCCD. Those who have received medical attention within 30 days from any institution would have been assessed by a physician and the methods to capture cause of death from the physician records may be a source of data for MCCD. 109(22%) deaths which occurred at home were brought against medical advice again in most of which is from government institutions 84(71%) and only 2% received MCCD among them. The inference requires a separate study on the reasons for increased number of discharges on against medical advice in government institutions and the ways on which MCCD be provided for these cases if needed.

Among the home deaths 22(5%), relatives of deceased were seeking MCCD in which 15(68%) was requested by VAO for providing death certificate. The relatives or bystanders of the deceased did get the MCCD when they tried to get the MCCD certificate. The major reason for not attempting death certificate among home deaths was that they didn't

know about MCCD 339(72%) followed by the reason that the deceased cause of death were assumed by the relatives themselves105(22%).

It has been noted that the awareness on MCCD is totally lacking among the community based on the results. The practice on assuming the Cause of death by the relatives themselves in the elderly is another major reason for the non-availability of MCCD. The importance of MCCD has to be stressed upon starting from Health Care worker and then taken to the community level.

#### **CONCLUSION**

The study findings call for community-based awareness programmes to provide a simple, clear and understandable message to reinforce knowledge about MCCD through Health Care Providers to create awareness on importance of population level cause-specific mortality statistics, which will translate into good practice. The Targeted training for all doctors especially from government institutions and Registrars on MCCD and its importance should be recommended.

# RECOMMENDATIONS

Notifiers (VHN/SHN/CHN/Anganwadi Workers and ASHAs to be informed to create awareness among the public in Villages on the importance of the Medical Certification of Cause of Death and from whom it should be collected and provided to the Birth and Death Registrar concerned for Registration of the Death.

Block Health Supervisors (Block Level Registrar) should visit the village Panchayats for scrutiny of the Birth and Death Registration and ensure whether the MCCD is collected for Domiciliary Deaths attended by Medical Practitioners during last illness and the recording of Cause of Death is properly made by the Birth and Death Registrar.

It is to be identified whether any huge fee is collected for Form 4A by the Medical Practitioners in Village Panchayats. IMA to be informed to issue circular to all Medical Practitioners to provide MCCD in Form 4/4A at free of cost. In respect of against medical advice it is to be ascertained to identify the causes for Against Medical Advice and methods to capture Cause of Death from these persons. The Doctors and Registrars must be trained and made aware on the procedures of providing MCCD to the deceased by the attending physician.

#### **CONFLICT OF INTEREST:** None

# **REFERENCES**

- 1. Jha P: Counting the dead is one of the world's best investments to reduce premature mortality. Med Hypothesis 2012, 10:e1.
- 2. Vogel G: How do you count the dead? Science 2012, 336:1372-1374.
- 3. Mathers C, Ma Fat D, Inoue M, Rao C, Lopez AD: Counting the dead and what they died of: an assessment of the global status of cause of death data. Bull World Health Organ 2005, 83:171–177.
- 4. Hill K, Lopez AD, Shibuya K, Jha P: Interim measures for meeting needs for health sector data: births, deaths, and causes of death. Lancet 2007, 370:1726–1735.
- 5. Setel PW, Sankoh O, Mathers C, Velkoff VA, Rao C, Gonghuan Y, Hemed Y, Jha P, Lopez AD: Sample registration of vital events with verbal autopsy: a renewed commitment to measuring and monitoring vital statistics. Bull World Health Organ 2005, 83:611–617.

6.www.who.int/news-room/fact-sheets/detail/civil-

registration-why-counting-births-and-deaths-is-important

- 7. Adair T. Who dies where? Estimating the percentage of deaths that occur at home. BMJ Global Health 2021;6:e006766. doi:10.1136/bmjgh-2021-006766
- 8. United Nations, World Population Prospects: The 2012 revision. Extended Dataset DVD (Excel and ASCII formats) In Department of Economic and Social Affairs, Population Division (2013) ST/ESA/SER.A/334). 2013.
- 9. Jha P. Reliable direct measurement of causes of death in low- and middleincome countries. BMC Med. 2014;12:19
- 10.Black RE, Cousens S, Johnson HL, Lawn JE, Rudan I,Bassani DG, Jha P, Campbell H, Walker CF, Cibulskis R, Eisele T, Liu L, Mathers C, for the Child Health Epidemiology Reference Group of WHO and UNICEF: Global, regional, and national causes of child mortality in 2008: a systematic analysis. Lancet 2010, 375:1969–1987
- 11. CRS 2020 report India
- 12. Source of data -SBHI Tamil Nadu