Short Communication

Evaluation of Medical Certificate of Cause of Death (MCCD) Training imparted to Medical Officers of Vadodara District located in Gujarat

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Abstract:
Complete, timely and accurate registration of death is crucial for understanding population dynamics and planning effective development programmes. However, there has been little research on the dynamics of the certification process and the extent of training of physician certifiers. This study aims to find out the extent to which the training imparted to Medical Officers at primary and secondary level could improve their skills in filling up of MCCD certificates. A pretested semi-structured proforma to test various components of the cause of death certificate was administered to the participants before and after the training that lasted for five hours. Of 120, only 80 participants from four trainings filled the pre and post-test tool. Almost all of them thought that there was a dire necessity of MCCD training.
Conclusion & Recommendation: The MCCD training imparted to the Medical Officers significantly improved their knowledge regarding various causes of death to be entered in MCCD certificates. Adequate training and proper sensitization of the private and government doctors regarding the usefulness of MCCD data is required. Pre and post-test assessment as utilized at this center offers feedback to the trainers as well as participants about the adequacy and importance of MCCD. Rechecking of randomly selected forms (say 10%) filled by medical officers by concerned doctors at district level is recommended.

Key Words: Medical Certificate of Cause of death, Training, Pretest, Post-test, Medical Officers.

Introduction

The Medical Certificate of Cause of death (MCCD) plays an important role in providing mortality pattern of various diseases. Because of this reason, the MCCD scheme has been interwoven with the Registration of Births and Deaths Act, 1969 [1] and is provided with legal support. MCCD is basically a part of International Statistical Classification of Diseases (ICD) and health related problems formulated by World Health Organization (WHO). It provides basic scientific information for medical research and it enables planners to understand the trend and mortality pattern of various diseases.

The Registration of Births and Deaths Act, 1969 came into force in the State of Gujarat in 1970. The MCCD scheme was introduced only in Vadodara Municipal Corporation on an experimental basis during 1971. With the introduction of Gujarat Registration of Births and Deaths Rules of 1973, all civil surgeons and medical officers of referral hospitals were intimated to introduce the certification of death as per prescribed proforma under the rule. However, to bring full strength and quality of data in the MCCD scheme, efforts

are required by way of imparting training to medical personnel, coders and statistical personnel[2].

To ensure correct and proper filling up of these forms, the Union Government is currently covering this scheme in phased manner to include Medical Practitioners and Coders at primary, secondary and tertiary levels. In Gujarat, all the Doctors and Coders are being trained in a phased manner. It is also being included in the MBBS curriculum so that budding medical practitioners will be well versed with this issue.

There is long way to go to achieve completeness of death registration in Gujarat, as is the case elsewhere in India. Complete, timely and accurate registration of death is crucial for understanding population dynamics and planning effective development programmes. Incomplete or inaccurate entry in these certificates poses difficulty in obtaining reliable information pertaining to causes of mortality. More so, there has been little research on the dynamics of the certification process and the extent of training of physician certifiers. Hence, this study aims to find out the extent to which the training imparted to Medical Officers at primary and secondary level to improve their skills in filling up of MCCD certificates.

Methods

Doctors at Medical Colleges are trained at state level, mostly at State Institute of Health & Family Welfare (SIHFW) Sola, Ahmedabad and they in turn impart trainings to Medical Officers posted at Primary Health Centers and Community Health Centers on a regular basis. These doctors are deputed for a day long training from the office of DHO Vadodara, in a batch of 25-30.This study reflects the findings of the feedback taken from the participants of MCCD training between 2010 and 2012 at a training center of Vadodara district located in Gujarat. 120 participants were trained in a batch of 30 each at four different training sessions. A pretested semi-structured proforma to test various components of the cause of death certificate, accuracy and completeness pertaining to MCCD, uses of MCCD and a case study to practice was administered to the participants before and after each training that lasted for eight hours.

Results and Discussion

Of 120, only 80 participants from four trainings filled the pre and post-test tool. All of them were Medical Officers from Vadodara district. A total of 80 participants filled the pre and post-test tool out of the 120 who took the training. The rest could not offer feedback as they did not either report in time or returned back blank forms. Almost all of them (92.5%) mentioned that there was a dire necessity of MCCD training for them. Seventy percent (56/80) participants reported that they were filling the MCCD form in their department routinely. Twenty percent (16/80) were well versed with the issue as MCCD was taught to them as part of undergraduate curriculum. Only eight participants had received some training in MCCD after their basic medical qualification (MBBS). Eighty percent (64/80) reported having faced difficulty while filling up the forms, especially; when sudden death of the person occurred, when dead body was brought to the hospital, in postmortem cases and in cases of newborns. Most common reason given by them for these difficulties was a lack of training in MCCD.

Only 15% of the participants were up to the mark regarding the accuracy and completeness of the MCCD form. A quarter of them opined that MCCD form should be modified so as to make it more simple, specific and understandable. One of the barriers to the implementation of MCCD as

mentioned by almost three quarter of them was the unavailability of coders to do ICD classification of causes of death at their settings. Some of the pertinent suggestions for improvement as mentioned by them were; the need of training the concerned district level officials as well, the need for review meetings at yearly interval and proper maintenance of the medical records. The perception of one third of the participants was that, they were not satisfied with completeness and accuracy of death certificates filled by them (Table I).

Table 1: Knowledge, Attitude and Practice of the Participants regarding MCCD (n= 80)

Components	No.	%
Felt Need for MCCD training	74	92.5
Prior training received- a) During MBBS	16	20
b) Others: (Guest lectures, self - reading, formal training)	8	10
Filling MCCD certificate routinely	56	70
Difficulty faced while filling the MCCD forms-	64	80
a) When sudden death of the person occurred	38	47.5
b) When dead body was brought to the hospital	56	70
c) Post-mortem cases	54	67.5
d) Newborns	12	15
Correctly mentioned accuracy and completeness related to MCCD	12	15
Modification of MCCD forms required-	20	25
a) It should be simple to fill up the forms	20	25
b) It should be specific	5	6.3
c) It should be easily understandable.	16	20
Barriers to the implementation of MCCD- Unavailability of a technical person at their settings	58	72.5
Suggestions for improvement-	49	61.2
a) Need of training the concerned district level (Officials as well.)	42	52.5
b) Need of review meetings at yearly interval	31	38.8
Not satisfied with completeness and accuracy of MCCD forms filled by them	24	30

1. The MCCD training imparted to the Medical Officers significantly improved their knowledge regarding immediate, antecedent and underlying cause of death ($p<0.0001$) to be entered in MCCD certificates. Although improvement was also seen regarding their knowledge about contributory cause, but this was not statistically significant. Similarly statistically significant difference was seen in their knowledge regarding manner of death and injury and the uses of MCCD (Table 2). These pretest findings are in line with the findings of an unpublished research (thesis) conducted by Jain Kamlesh (Situational analysis of Civil

Table 2: Comparison of correct knowledge of participants regarding MCCD during pretest and post test. (n=80)

Knowledge regarding different causes of death	Pre test No.	%	Post test No.	%	P value (chi square test)
Immediate cause	12	15	44	55	<0.0001
Antecedent cause	12	15	44	55	<0.0001
Underlying cause	8	10	60	75	<0.0001

Registration System in Municipal Corporation area of Ahmedabad. A dissertation submitted to Gujarat University, MD (Preventive & Social Medicine, October 2009) which reported that only 2.04% forms were completely filled. A study by Agarwal Swapnil S et al [(3)], reflected that there was confusion and inadequate understanding of the meaning of terms 'causes of death', 'modes of death', and 'manners of death' among the doctors, findings similar to the pretest of our study . In our study also most of the time heart failure was mentioned as the immediate cause of death. While interpreting the given case study data, it was observed that during the pre test, although the participants mentioned gender and age, the name of the deceased was frequently missing. Nonetheless, knowledge on age, sex and name have been significantly improved in the post test. There was also significant improvement seen in the post-test with regard to the immediate, antecedent, underlying and contributory causes. The same was also seen in mentioning the time interval in relation to different causes of death, regarding correct filling of manner of death and injury signature of the doctor (Table 3).

Table 3: Pretest and Post test assessment of the participants based on the given case study (n=80)

Correctly mentioned in the given case study	Pre test No.	%	Post test No.	%	P value (chi square test)
Name of deceased	8	10	34	42.5	<0.0001
Sex	61	76.2	76	95	0.0016
Age	58	72.5	74	92.5	0.0018
Immediate cause	12	15	64	80	<0.0001
Antecedent cause	12	15	32	40	0.0008
Underlying cause	4	5	60	75	<0.0001
Contributory cause	8	10	48	60	<0.0001
Time interval in relation to different causes of death	3	3.7	42	52.5	<0.0001
Manner of death and injury	28	35	64	80	<0.0001
Name and signature of medical attendant	4	5	45	56.2	<0.0001

Conclusions & Recommendations

The MCCD training imparted to the Medical Officers significantly improved their knowledge regarding various causes of death to be entered in MCCD certificates. Adequate training and proper sensitization of the private and government doctors regarding the usefulness of MCCD data is required. Pre and post-test assessment as utilized at this center offers feedback to the trainers as well as participants about the adequacy and importance of MCCD. Rechecking of randomly selected forms (say 10%) filled by medical officers by concerned doctors at district level is recommended. An extra effort needs to be put forth towards re-orienting them for instance, inculcating positive attitude and addressing the lacunae in the scheme.

References:

1. The Gazette of India. The registration of Birth and Death Act, 1969. Govt. of India.
2. Physicians' Handbook on Medical Certification of Cause of Death. Chief Registrar (Birth and Death) and Commissioner Health, Medical services and Medical Education, Gujarat State, Gandhinagar, January 2009.
3. Agrawal Swapnil S , Kumar Vijay A G, Kumar Lavlesh, Bastia Binay K , Chavali Krishnadutt H. A study on Appraisal of Effectiveness of the MCCD scheme. J Indian Acad Forensic Medicine 2010; 32(4); 318-320.