HEALTH CARE PROFESSIONALS’ KNOWLEDGE ON HOME HEALTH CARE IN AL-KHOBAR AND AL-DAMMAM

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Objective: To survey self-reported knowledge of home health care (HHC) services of health care professionals in Al-Khobar and Al-Dammam.

Methods: A specially developed questionnaire was used to conduct a cross-sectional study to find out how knowledgeable 11 hospital administrators, 16 PHHC medical directors, and 637 health care team were of HHC services.

Results: When asked whether they knew of HHC services, 90.9% of medical directors, 62.5% of primary health care center directors, 83.1% of physicians, 92.9% of nurses, 98.6% of physiotherapists, 95.9% of social workers, and 57.6% of the health team members replied that they did, although this knowledge was very scanty. Health care workers’ source of information on HHC services was hospital work (65.0%) while administrators’ sources were journals (65.0%). Only 11.1% of the administrators and 30.3% of the health team members indicated having had HHC training from university, and 3.7% of administrators and 20.4% of health team members indicated having attended a HHC lecture or symposium. The only finding with significant difference of responses (p<0.001) was on the knowledge of HHC services among health care professionals. All other responses showed no significant differences between them. No significant differences in the responses were found between the two groups of administrators.

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Conclusions: Health professionals and administrators showed little knowledge of HHC services. The main source of HHC information for health professionals was from their hospital experience while administrators learned more about HHC services from medical journals.

Recommendations: HHC training centers must be set up in Saudi Arabia. Home health care concepts and skills should be part of the regular health science undergraduate curriculum.

Key Words. Home Health Care (HHC).

INTRODUCTION
Home health care (HHC) is that component of a continuum of comprehensive health care whereby health services are provided to individuals and families in their places of residence in order to promote, maintain or restore health, or maximize the level of independence, while minimizing the effects of disability and illness, including terminal illness.\(^1\) Due to the steady increase in the prevalence of chronic diseases, aging population, and hospital costs, home health care has become an essential component of the healthcare system in developed countries. This has helped to reduce the length of hospital stay, increase the desire of patients and relatives to avoid prolonged expensive hospital care particularly at the end of the patient’s life, decrease the risk of cross-infection, and preserve the identity, comfort, and satisfaction of the patient and his family.\(^2\)\(^-\)\(^11\)

Since greater involvement of professional health care workers in home health care is inevitable, training and practice for home health care can be incorporated into the undergraduate, graduate, and continuing education of physicians.\(^12\)

In the late 1980s, health providers felt the need for HHC programs to reduce long term hospital bed occupancy and provide effective managed medical and nursing services for patients at home, and as a result initiated hospital-based HHC programs in Saudi Arabia.\(^13\)\(^,\)\(^14\) At present, there are five well-established government-sponsored HHC programs at: King Faisal Specialist Hospital in Alqassim, King Fahad National Guard Hospital in Riyadh, Military hospital in Riyadh, and King Khalid National Guards Hospital in Jeddah. Some HHC programs also exist in some expensive private hospitals. The Green Crescent Hospital in Riyadh established a home care program in the late 1980’s as part of its Emergency Department.\(^15\) Developing home health care program in Saudi Arabia is one of the opportunities for improved efficiency in the healthcare system.\(^16\)

The present study is valuable because it establishes baseline data for the institution of a training program on HHC in the degree courses and continuing education for health care professionals.

Specifically, it surveyed the HHC knowledge of health care professionals (administrators of hospital and health care centers, physicians, physiotherapists, nurses, and social workers) in Al-Khobar and Al-Dammam.

METHODS
This is a cross-sectional descriptive study conducted on 637 health team workers and 27 administrators of Al-Dammam and Al-Khobar. Eleven administrators were taken from government and private hospitals with more than 49 beds, and 16 administrators were also selected randomly from 33 PHHCs (Table 1). The sample of 637 health team members was selected by a two-stage stratified random sampling, allocated proportionally. In the first stage, the population was divided into three strata. In the second stage, the total number of members of each stratum was determined by using proportional allocation each, and the PHCC stratum was divided into PHCCs of Al-Khobar and Al-Dammam, each comprising 15% of the physicians and 10% of the nurses chosen by the use of random number digit table. The hospital sample was divided into 11 strata consisting of one hospital in each stratum composed of 15% of its physicians, 10% of nurses, and all physiotherapists and social workers. Administrators were grouped separately from non-administrators as a sample because the study assumed that they knew more about HHC services than the rest.

Two specially designed self-administered interview questionnaires were used to collect the data from the sample. The data from health
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Table 1: Distribution of respondents according to health sectors, Eastern Province, Saudi Arabia, 2000

| Health Sector               | Administrators | Physicians | Nurses | Physiotherapists | Social workers |
|-----------------------------|----------------|------------|--------|------------------|----------------|
|                             | Hospital       | PHHC       |        |                  |                |
| Governmental health workers | 3              | 16         | 135    | 192              | 30             | 14             |
| Private hospitals*          | 8              | -          | 72     | 147              | 37             | 14             |
| Total                       | 11             | 16         | 207    | 339              | 67             | 28             |

*Hospital and primary health care

Table 2: Sources of information and knowledge of respondent administrators on HHC services, Eastern Province, Kingdom of Saudi Arabia, 2000

| Knowledge and sources of information and training | Hospital Medical Directors (n=11) | PHHC Directors (n=16) | Total (n=27) | p-value |
|--------------------------------------------------|----------------------------------|-----------------------|--------------|---------|
| Knowledge about HHC service:                     | No idea (n=9)                    | No idea (n=16)        | No idea (n=25) | p=0.0080 |
|                                                  | Little knowledge (n=55)          | Little knowledge (n=80)| Little knowledge (n=135)| 0.004 |
|                                                  | Good knowledge (n=55)            | Good knowledge (n=20)| Good knowledge (n=70)| 0.004 |
| Sources of information:                         | College during study (n=9)       | College during study (n=16)| College during study (n=25)| 0.004 |
|                                                  | Hospital during work (n=7)       | Hospital during work (n=30)| Hospital during work (n=37)| 0.004 |
|                                                  | Colleague (n=55)                | Colleague (n=20)| Colleague (n=70)| 0.004 |
|                                                  | Patient (n=10)                  | Patient (n=20)| Patient (n=70)| 0.004 |
|                                                  | Newspaper or magazine (n=55)     | Newspaper or magazine (n=20)| Newspaper or magazine (n=70)| 0.004 |
|                                                  | Medical journal (n=8)            | Medical journal (n=20)| Medical journal (n=70)| 0.004 |
|                                                  | Textbook (n=2)                  | Textbook (n=30)| Textbook (n=70)| 0.004 |
|                                                  | Other media (n=1)                | Other media (n=10)| Other media (n=70)| 0.004 |
| Received training at:                           | Received training at University on HHC (n=11) | - | Received training at University on HHC (n=11) | 0.004 |
|                                                  | Attended lecture or symposium on HHC (n=9) | - | Attended lecture or symposium on HHC (n=9) | 0.004 |

Table 3: Sources of information and knowledge of respondent health care professionals on HHC services, Eastern Province, Kingdom of Saudi Arabia, 2000

| Knowledge and sources of information and training | Physicians (n=207) | Nurse (n=67) | Physiotherapist (n=67) | Social worker (n=339) | Health teams (n=339) | p-value |
|--------------------------------------------------|---------------------|-------------|------------------------|-----------------------|----------------------|---------|
| Knowledge about HHC service:                     | No idea (16.9)      | No idea (24.7)| No idea (23.7)        | No idea (41.6)       | No idea (41.6)      | <0.001  |
|                                                  | Little knowledge (54.6)| Little knowledge (68.2)| Little knowledge (73.9)| Little knowledge (81.3)| Little knowledge (81.3)| 0.004  |
|                                                  | Good knowledge (28.5)| Good knowledge (30.1)| Good knowledge (30.1)| Good knowledge (28.3)| Good knowledge (28.3)| 0.009  |
| Sources of information:                         | College during study (38.7)| College during study (62.5)| College during study (49.2)| College during study (37.3)| College during study (37.3)| <0.001 |
|                                                  | Hospital during work (54.3)| Hospital during work (68.3)| Hospital during work (74.2)| Hospital during work (37.3)| Hospital during work (37.3)| 0.004  |
|                                                  | Colleague (28.9)     | Colleague (17.1)| Colleague (31.8)       | Colleague (43.1)      | Colleague (43.1)     | 0.01    |
|                                                  | Patient (10.4)       | Patient (19.7)| Patient (25.8)         | Patient (8.7)         | Patient (8.7)        | 0.009  |
|                                                  | Newspaper or magazine (17.9)| Newspaper or magazine (22.5)| Newspaper or magazine (24.2)| Newspaper or magazine (17.4)| Newspaper or magazine (17.4)| 0.568  |
|                                                  | Medical journal (38.7)| Medical journal (30.2)| Medical journal (37.9)| Medical journal (21.7)| Medical journal (21.7)| 0.127  |
|                                                  | Textbook (19.7)      | Textbook (23.8)| Textbook (18.2)        | Textbook (21.7)       | Textbook (21.7)      | 0.127  |
|                                                  | Other media (19.1)   | Other media (15.2)| Other media (19.7)      | Other media (35.3)    | Other media (35.3)   | 0.633  |
| Received training at:                           | Received training at University on HHC (12.1)| Received training at University on HHC (141.6)| Received training at University on HHC (37.3)| Received training at University on HHC (8.3)| Received training at University on HHC (8.3)| 0.007  |
|                                                  | Attended lecture or symposium on HHC (15.0) | Attended lecture or symposium on HHC (21.8)| Attended lecture or symposium on HHC (29.4)| Attended lecture or symposium on HHC (25.0)| Attended lecture or symposium on HHC (25.0)| 0.069  |

administrators were collected by means of two-part questionnaire. Part one, composed of eight items, dealt with health administrators’ background, and part two, composed of 12 items, tried to find out their HHC knowledge and its sources. Reliability were Cronbach’s $\alpha = 0.80$ and Guttman split-half $r = 0.78$.

The Health Team Members Questionnaire was designed to determine the self-reported knowledge of HHC services among health
professionals. This was a three-part questionnaire consisting of open and closed questions. Part one introduced the study. Part two consisted of nine items on demographic data. The twelve items in part three asked for knowledge of HHC services and sources of information of HHC services. Cronbach’s alpha reliability test was 0.86 and Guttman split-half reliability test was 0.80.

Statistical analyses were done both in analytic and descriptive techniques for the two questionnaires. All items of the questionnaires were coded, entered, and checked before analysis was done with significance set at less than 0.05 using SPSS. Percentages, mean, standard deviation, and Chi-square ($\chi^2$) were used as appropriate. Ethical considerations were observed.

RESULTS
The mean ages of administrators were: 48.0 ± 8.8 years for hospital medical directors, 37.8 ± 8.8 years for primary health care center directors, and 42 ± 10.1 years for all administrators. About 91% of the hospital medical directors, and 50% of the primary health care center directors were generally more than 40. Saudis were 18.2% of the hospital medical directors and 81.2% of the primary health care center directors (p=0.002). About 91% of the hospital medical directors and 19% of the primary health care center directors had postgraduate education (p < 0.001). The mean age of the health care professionals was 35.5 ± 8.0 years, (39.0 ± 8.0 for physicians, 32.5 ± 7.5 years for nurses, 32.6 ± 7.8 years for physiotherapists, and 32.6 ± 5.4 years for social workers at a statistically significant difference of p<0.01).

The administrators’ self-reported knowledge of home health care (90% of hospital medical directors and 62.5% of primary health care center directors) was shown in Table 2 as not significantly different (p = 0.080). The main sources of knowledge of HHC services were obtained from college education and hospital work (50%) among health administrators, from medical journals (80%), from hospital experience (70%), from colleagues (50%), and college education (40%) among hospital medical directors, and from college education (60%), and medical journals (50%) among primary health care center directors. There was no significant difference in the groups’ responses.

There was statistically significant difference among the health care professionals' knowledge about home health care service (p<0.001) as shown in Table 3. 49.3% of the physiotherapists were more aware of HHC compared to other members of the team (30.1% of nurses, 28.5% of physicians, and 16.7% of social workers). The main sources of health care professionals’ knowledge of HHC services were hospital work (65.0%) and college education (54.6%). Hospital work was the main source of knowledge of the physicians (54.3%), nurses (68.3%) social workers (73.9%), and physiotherapists (74.2%). About 30% of the health care professionals had received university training on HHC services with significant differences (p<0.001) between groups. 41.6% of the nurses had received university training on HHC service, followed by 37.3% of the physiotherapists, 12.1% of the physicians, and 8.3% of the social workers.

One-fifth of the health care professionals had attended lectures or symposia on HHC service, with no statistically significant difference (p = 0.69) between the samples. Approximately 28% of the physiotherapists had attended a lecture or symposium on home health care services, next were social workers (25%), and the nurses (21.8%), and 15% of the physicians.

DISCUSSION
A higher percentage of the hospital medical directors as compared to primary health care center directors had knowledge of HHC services because of their awareness of actual long-term bed occupancy and their concern about rising demands. They are, therefore, interested in finding such alternatives to long hospital care as HHC.

The percentage of health care professionals with a good knowledge of home health care services is much lower than the findings of a similar study in the USA among laymen. The findings which showed that the majority of physicians had heard of HHC only during hospital work and many had little or no knowledge of HHC services reflected the lack of education and training on HHC in medical schools, a deficiency in continuing medical education, and the apathy towards the reading of journal articles on HHC.
The little knowledge the majority of social workers had about HHC was acquired through their hospital work reflecting a lack of HHC training in college. In Saudi Arabia, nurses are supposed to make home visits as part of the antenatal care program and immunization campaigns. This was misconstrued as part of home health care services. Thus only 30% of the nurses, mainly senior staff who had bachelor's degree and had acquired medical information from reading medical journals had good knowledge of HHC services. Physiotherapists had good knowledge of HHC services because of their education and practice in dealing with chronic conditions.

Since recognition for home health care services in Saudi came only in the last decade, a good percentage of the health team members only recently began to attend lectures or symposia on HHC.

CONCLUSION AND RECOMMENDATIONS
The findings of the study imply that hospital and PHHC administrators, as well as health care professionals, knew little about HHC services. The sources of knowledge of administrators were medical journals, college studies, and hospital work, in that order, while for health care professionals, hospital experience was the main source of knowledge of those services.

The conclusions of the study are that policymakers in the Ministry of Health need to implement measures to include HHC concepts and skills in the education and training of health care professionals, promote the HHC through media, on-the-job training, symposia, workshops, and short courses. Curriculum designers in medical schools should encourage the inclusion of some concepts and skills of home health care in the curriculum of medical, nursing, and health sciences schools as part of regular undergraduate studies, and incorporate training on home health care practice in post graduate programs.

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