Role of Medical Officers In Referring the Dental Patients In Primary Health Centers Of Ranga Reddy District, Andhra Pradesh, India.

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Role of Medical Officers In Referring the Dental Patients In Primary Health Centers Of Ranga Reddy District, Andhra Pradesh, India.

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Abstract

Aim: The aim of this study was to assess the awareness of dental problems and the referral system adopted by medical officers working in PHCs of Ranga Reddy district.

Methods: A cross sectional questionnaire survey was conducted among medical officers working in PHCs of Ranga Reddy district. Data was obtained through a closed ended, structured questionnaire consisting of socio-demographic data, awareness regarding dental problems and referral pattern of patients with dental problems by medical officers working in PHC. All the medical officers who were working in the PHCs were included in the study.

Results: 45% of the patients visiting PHCs presented with dental problems such as dental caries and gum problems. 90% of the medical officers of the PHCs did not offer any dental treatment to the patients. Medicines were prescribed by all the medical officers to the patients with dental problems. Almost 45% of the medical officers referred their patients to a nearby dental college based on the severity of the condition.

Conclusion: It can be concluded from this study that, most of the medical officers had a positive attitude towards diagnosis and treatment of the dental problems, but they neither had sufficient knowledge nor the resources to provide dental services. Oral health is neglected in rural areas, so there is need for at least one dentist in the PHCs to promote the oral health of the people.

Introduction

The Primary Health Care concept promulgated at Alma Ata did not define its application in the delivery of oral health services. Following the Alma Ata declaration, the adoption of “Health for all by year 2000” set the agenda for a new public health strategy in the direction of Primary Health Care (PHC). The strategy focused mostly on medical programs, many countries have extended these PHC principles to include dental services too. The observation is that a more equitable, effective and affordable dental care would be enjoyed, especially by the relatively poor, developing countries, if this was integrated into their existing PHC systems.

The PHC is considered an opportune site to reach large numbers of patients who make a medical visit but not a dental visit. Physicians and their auxiliaries can assess risks for dental problems and counsel parents and their children about the prevention of these problems. They can also provide screening services for early detection of dental disease, advice the patients in need to seek dental care, and refer them to dental hospitals. These services can help to prevent acute episodes of pain and infection, but some medical providers with lack of knowledge or limited knowledge regarding dental problems and under pressure to see more patients, may not diagnose and refer patients with dental problems.

This important interface between medical and dental practitioners has received only superficial study. Literature showed that 90% or more of family physicians and pediatricians report in national studies that they conduct dental caries risk assessments in at least some of their patients, 87% or more screen for caries, and many have difficulty in referring patients for dental care.

A study done by Retnakumari in Kerala reported that, knowledge and attitude on oral health among medical practitioners was inadequate, other study conducted by Sham S. Bhat et al among medical practitioners in Mangalore city reported that there is a need for more communication between the medicine and dentistry so as to deliver better dental treatments. Basic questions about the dental referral process and its outcomes remain unanswered. It is not known whether a recommendation for a dental visit results from some factor external to the medical care setting, such as the supply of dentists; some characteristics of providers or their medical practices; or some characteristics of patients and their families. We are not aware of studies that have investigated the predictors of referral of patients to dentists by primary care clinicians. The purpose of this study was to examine the reported referral decisions of medical officers and factors that might influence their decisions.
Aim:
To assess the role of medical officer’s in referring dental patients in PHCs of Ranga Reddy district, Andhra Pradesh.

Objectives:
1. To assess the referral system adopted by these medical officers working in the PHCs of Ranga Reddy dist.

Methods

Participants
A cross sectional survey was conducted among medical officers working in PHCs of Ranga Reddy district in the month of October-November 2011. List of medical officers who are working in the PHCs of Ranga Reddy district was obtained from district medical and health Officer.

69 medical officers were working in various PHCs. 64 medical officers participated in the study and 5 refused to participate in the study.

Survey instrument:
A Questionnaire was divided in to 3 sections comprising a series of questions pertaining to socio-demographic and practice characteristics, awareness or knowledge regarding oral disease and information regarding referral system.

In demographic portion of questionnaire included questions on age, gender, years in practice and qualification. Second set of questions assessed various types of management practiced by medical officers like examination of oral cavity, palliative care, minor treatments etc. In the 3rd section participants answered questions regarding regular referral of patients with dental problems, basis for referral system and factors that might influence their referral decision. A complete anonymous, self administered questionnaire was used in the survey.

Data collection
Extensive pre administration piloting was conducted including interviews with 10 medical officers to ensure that questionnaire is comprehensive and valid. Items were included in the survey if there was near universal consciences on their meaning.

Study was conducted with survey methods involving questionnaire which was given directly to the medical officers and filled questionnaire was collected on the same day. Medical officers who were not present on initial day of survey were approached on other day.

Data Analysis
The data was compiled and entered in to Microsoft excel 2007. Data was tabulated and analyzed using the statistical package for the social sciences (SPSS) 12.0. The chi –square test was used to test association between medical officers and independent variables (regarding knowledge and awareness and referral pattern).

Results

A cross sectional survey was conducted in the month of October-November 2011. Of the total 69 medical officers working in various PHCs, 64 participated in the study and 5 medical officers refused to participate.

Among medical officers 48.43% were female and 51.56% were male. Mean age of study population was 37.8 years. In the study population 81.25% of medical officers were medicine graduates and 18.75% were post graduates in different specialties.

Descriptive statistics for screening, risk assessment, and referral activity are presented in Table 1. All the PHCs of Ranga Reddy district had attendance of patients with dental problems of which, 64.20% of the PHCs had at least 10 dental patients per week. 23.40% of the medical officers reported that they were having difficulty in diagnosing the dental problems (Table 2). Patients visiting the PHCs with dental problems, suffered mostly from dental caries and gum problems (42.20%). Although medical officers provided dental treatments like extractions (22.20%) and scaling (1.60%), most of the medical officers (76.20%) were unable to render any dental treatment (Table 3. All the medical officers prescribed antibiotics and analgesics for dental ailments. Rank order for the referral system followed by the medical officers in PHCs was 40.60% to nearby dental college, 28.10% to CHC, 21.90% to District hospitals. 4.70% medical officers reported that they were referring patients directly to the private dental clinic. In most of the PHCs, staff nurses and pharmacists (42.20% and10.90%) were referring patients with dental problem in the absence of medical officer. Severity of the problem was the basis for referral for 79.70% of the medical officers, while the other 14.10% referred all the dental patients. 26.60% of the PHCs were attended by approximately 5 patients with oral cancer every year. Most of the medical officers (42.20%) were referring oral cancer patients to the dental colleges. 92.20% medical officers reported that PHCs are not well equipped for emergency services and 70.40% medical officers reported that there is need for the dentist in
PHCs (Tables 4&5)

Table 1: Shows the responses of medical officers for questions relating to screening, risk assessment, and referral activity.

See Illustration 5

Table 2: Qualification of medical officers vs Difficulty in diagnosing patients with dental problems

See Illustration 6

Table 3: Qualification of medical officers vs treatments given to the patients with dental problems other than medication

See Illustration 7

Table 4: Experience of the medical officers in years vs opinion on need for a dentist in PHCs

See Illustration 8

Table 5: Gender of the medical officers in PHCs Vs opinion on need for a dentist in PHCs

See Illustration 9

Discussion

The PHC is considered an opportune site to reach large numbers of patients who make a medical visit but not a dental visit. Physicians can provide screening services for early detection of dental disease, provide advice about the need to seek dental care, and refer those in need.

In this study, percentage of female medical officers was low compared to Georgia et al’s survey (48.43% vs 53%) 2. All the medical officers felt that referring patients for dental care as part of their regular practice and this percentage was larger than that of Georgia et al’s survey (90%) 2. The findings from this study suggest that the majority of medical officers do not wait until the patients have pain or the dental diseases are in advanced stage before they refer. This provides the basis for an encouraging “middle ground” between referring all patients, regardless of their characteristics.

In the present study all the medical officers reported that they perform dental examination for all the patients and this percentage was higher in contrast to a study by Richeal Ni Riordain et al (63.6%) 5. Most of the health care providers in this study held positive opinions about providing dental screening, assessing risk factors in their patients, and referral. This can be instrumental in helping patients to get dental care, yet most providers face difficulties in making dental referrals. Changes in the availability of dental care will be necessary to decrease these barriers before referral can be most effective.

Medical officers might benefit from interventions that are designed to improve skills and self-efficacy in the care of the oral health of their patients, but because studies also demonstrate the lack of effect of educational interventions on self-efficacy in some areas of practice, controlled trials are needed to determine whether changing one’s confidence in doing screenings and risk assessments will increase the likelihood of referral and improve oral health outcomes.

A recent US Surgeon General’s workshop resulted in a strong recommendation that preventive oral health care and risk-based dental referrals be provided in physicians’ offices. Difficulty in making dental referrals reported by medical practitioners in this study, which likely reflects actual problems with access to dental care for patients, reveals a major barrier to the effectiveness of interventions designed to increase physicians’ involvement in oral health screening, risk assessment, and referral for follow-up dental care. Such efforts directed toward the medical community will be ineffective unless sufficient attention is given to dental workforce issues. Successful models that both develop the dental workforce and integrate it with medical care need to be developed before substantial progress can be made in resolving problems in access to dental care.

Conclusion

Medical officers at PHCs showed limited knowledge regarding dental problems. Oral health is neglected in rural areas so there is need for at least one dentist in the PHCs to promote the oral health of the people. Medical students should also have mix of dental clinical experiences so that they can provide some basic dental treatments without any assistance. The PHCs should be well equipped to treat the patients with problems needing emergency dental/medical care. Medical and dental fraternities should have coordination and work in collaboration with each other for the better delivery of patient care.

References

3. Dela Cruz GG, Rozier RG, Slade G. Dental screening and referral of young children by pediatric primary care providers. Pediatrics, 2004; 114(5): e642-52
Illustrations

Illustration 1

Graph 1: Qualification of medical officers vs Difficulty in diagnosing patients with dental problems

Illustration 2

Graph 2: Qualification of medical officers vs treatments given to the patients with dental problems other than medication
Illustration 3

Graph 3: Experience of the medical officers in years vs opinion on need for a dentist in PHCs

Illustration 4

Graph 4: Gender of the medical officers in PHCs Vs opinion on need for a dentist in PHCs
Illustration 5

Shows the responses of medical officers for questions relating to screening, risk assessment, and referral activity.

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are patients with dental problems coming to PHC?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. YES</td>
<td>64</td>
<td>100%</td>
</tr>
<tr>
<td>b. No</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>2. How many patients visit your PHC with dental problem?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. 1-10/week</td>
<td>43</td>
<td>67.20%</td>
</tr>
<tr>
<td>1. 10-20/week</td>
<td>14</td>
<td>21.90%</td>
</tr>
<tr>
<td>1. &gt;20/week</td>
<td>7</td>
<td>10.90%</td>
</tr>
<tr>
<td>3. Do you examine the patients with dental problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Yes</td>
<td>64</td>
<td>100%</td>
</tr>
<tr>
<td>1. No</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>4. Do you have difficulty to diagnose the patients with dental problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Yes</td>
<td>15</td>
<td>23.40%</td>
</tr>
<tr>
<td>1. No</td>
<td>48</td>
<td>75.00%</td>
</tr>
</tbody>
</table>
5. What are the dental problems you come across in your patients?  

<table>
<thead>
<tr>
<th>Problem</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dental caries</td>
<td>5</td>
<td>7.80%</td>
</tr>
<tr>
<td>1. Gum problems</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1. Ulcers</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1. Dental flurosis</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1. Oral cancer</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1. Any other</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1. a&amp;b</td>
<td>27</td>
<td>42.20%</td>
</tr>
<tr>
<td>1. a&amp;C</td>
<td>5</td>
<td>7.80%</td>
</tr>
<tr>
<td>1. a&amp;b&amp;c</td>
<td>22</td>
<td>34.40%</td>
</tr>
<tr>
<td>1. a&amp;b&amp;c&amp;d</td>
<td>5</td>
<td>7.80%</td>
</tr>
</tbody>
</table>

6. Which medicine are you giving commonly to the patients with dental problem?

<table>
<thead>
<tr>
<th>Medicine Type</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anti biotics</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1. Pain killers</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
7. What treatments are you giving to the patients with dental problems other than medication?

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extractions</td>
<td>14</td>
<td>22.20%</td>
</tr>
<tr>
<td>Scalings</td>
<td>1</td>
<td>1.60%</td>
</tr>
<tr>
<td>Fillings</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Any other</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>None</td>
<td>48</td>
<td>76.20%</td>
</tr>
</tbody>
</table>

8. Where do you refer the patients with dental problems?

<table>
<thead>
<tr>
<th>Referral Source</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community health center</td>
<td>18</td>
<td>28.10%</td>
</tr>
<tr>
<td>District hospital</td>
<td>14</td>
<td>21.90%</td>
</tr>
<tr>
<td>Near by dental college</td>
<td>26</td>
<td>40.60%</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>1.60%</td>
</tr>
<tr>
<td>a&amp;b</td>
<td>4</td>
<td>6.30%</td>
</tr>
<tr>
<td>a&amp;c</td>
<td>1</td>
<td>1.60%</td>
</tr>
</tbody>
</table>
9. Do you refer the patients directly to a dentist in private clinic?

<table>
<thead>
<tr>
<th>Option</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3</td>
<td>4.70%</td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>95.30%</td>
</tr>
</tbody>
</table>

10. In the absence of medical officers who are the other staff members referring patients with dental problems?

<table>
<thead>
<tr>
<th>Option</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff nurse</td>
<td>27</td>
<td>42.20%</td>
</tr>
<tr>
<td>Health worker</td>
<td>1</td>
<td>1.60%</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>7</td>
<td>10.90%</td>
</tr>
<tr>
<td>Any other</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>a&amp;b</td>
<td>5</td>
<td>7.80%</td>
</tr>
<tr>
<td>a&amp;c</td>
<td>19</td>
<td>29.70%</td>
</tr>
<tr>
<td>a&amp;b&amp;c</td>
<td>5</td>
<td>7.80%</td>
</tr>
</tbody>
</table>

11. What is the basis for referral?

<table>
<thead>
<tr>
<th>Option</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity of the problem</td>
<td>51</td>
<td>79.70%</td>
</tr>
<tr>
<td>Economic status of the patient</td>
<td>3</td>
<td>4.70%</td>
</tr>
</tbody>
</table>
1. Attitude of the patient  
   0  0.00%  
   1. We refer all patients  
      9  14.10%  
   1. a&b  
      1  1.60%  

12. Have you come across any cases of oral cancer in your patients if yes how many?  
   1. 1-5/year  
      17  26.60%  
   1. 5-10/year  
      0  0.00%  
   1. 10-15/year  
      0  0.00%  
   1. 15-20/year  
      0  0.00%  
   1. None  
      47  73.40%  

13. Where do you refer patients with oral cancer?  
   1. Community hospital  
      8  12.50%  
   1. District hospital  
      14  21.87%  
   1. Dental college  
      27  42.20%
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Any hospital with an oncologist</td>
<td>7</td>
<td>10.90%</td>
</tr>
<tr>
<td>1. None</td>
<td>5</td>
<td>7.80%</td>
</tr>
<tr>
<td>1. c&amp;d</td>
<td>3</td>
<td>4.70%</td>
</tr>
<tr>
<td>14. Do you think PHCs are well equipped for any emergency services that may be required for any dental problem?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Yes</td>
<td>5</td>
<td>7.80%</td>
</tr>
<tr>
<td>1. No</td>
<td>59</td>
<td>92.20%</td>
</tr>
<tr>
<td>15. Do you feel there is a need for a dentist in PHCs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Yes</td>
<td>45</td>
<td>70.30%</td>
</tr>
<tr>
<td>1. No</td>
<td>19</td>
<td>29.70%</td>
</tr>
</tbody>
</table>
Illustration 6

Table 2

Qualification of medical officer’s vs Difficulty in diagnosing patients with dental problems

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBBS</td>
<td>10 (17.3%)</td>
<td>42 (80.8%)</td>
</tr>
<tr>
<td>PG</td>
<td>6 (50.0%)</td>
<td>6 (50.0%)</td>
</tr>
</tbody>
</table>

[Chi-Square Tests value=5.908 ; p=.042]
Illustration 7

Table 3

Qualification of medical officer’s vs treatments given to the patients with dental problems other than medication

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Extractions</th>
<th>Fillings</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBBS</td>
<td>10(19.6%)</td>
<td>0(0%)</td>
<td>41(80.4%)</td>
</tr>
<tr>
<td>PG</td>
<td>4(33.3%)</td>
<td>1(8.3%)</td>
<td>7(58.3%)</td>
</tr>
</tbody>
</table>

[Chi-Square Tests value =5.694; p =.058]
### Illustration 8

#### Table 4

<table>
<thead>
<tr>
<th>Experience</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>18(81.8%)</td>
<td>4(18.2%)</td>
</tr>
<tr>
<td>5-12</td>
<td>15(78.9%)</td>
<td>4(21.1%)</td>
</tr>
<tr>
<td>&gt;12</td>
<td>12(52.2%)</td>
<td>11(47.8%)</td>
</tr>
</tbody>
</table>

[Chi-Square Tests value = 5.699; p = 0.048]
Illustration 9

Table 5

<table>
<thead>
<tr>
<th>Gender</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>26(83.9%)</td>
<td>5(16.1%)</td>
</tr>
<tr>
<td>male</td>
<td>19(57.6%)</td>
<td>14(42.4%)</td>
</tr>
</tbody>
</table>

[Chi-Square Tests value 5.295; p = .021]
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