

Behavior and Practices of Family Physicians in the Referral of Dermatological Diseases: A Cross Sectional Study*

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ABSTRACT

INTRODUCTION: Referrals are the link between primary and specialty care. While the referring provider can be any type of physician, the focus in the literature has been on primary care physicians (PCPs). In their area of expertise, specialists are able to provide evidence-based care, and several studies have shown that specialists' co-management of care with PCPs results in better health care outcomes for patients with chronic diseases.

METHODOLOGY: The research design used was cross-sectional. A validated self-made questionnaire was disseminated to the family physicians (FPs) who are active members of the Philippine Academy of Family Physicians (PAFP) from the National Capital Region (NCR).

RESULT: Majority of FPs refer to dermatologists and more than half are affiliated with a hospital. Twenty percent had dermatology training which was not specified, and 44.2% took continuing medical education/seminars in dermatology. The top 3 most common dermatological diseases among the top ten existing dermatological diseases from January to December 2014 seen at the 11 accredited training institutions of the Philippine Dermatological Society (PDS) ranked by FPs as seen in their private practice were contact dermatitis, atopic dermatitis and acne vulgaris.

The primary reason for referral of FPs to a dermatologist was for "treatment" and "difficult cases." Average referral frequency within a month was two times while within a year it was more than five times. The criteria for choosing a particular dermatologist were good medical skill, geographic consideration and good FP-dermatologist communication. For the manner of referral, majority referred through letter, followed by phone calls and text messages. There were 53.8% FPs who were satisfied with the quality of communication with the dermatologists. Few FPs encountered difficulties in referring patients such as unavailability of the dermatologist, patient's financial constraints, patient's refusal, and the patient not being referred back to the primary physician by the dermatologist. According to 68.6% of FPs, their patients followed-up after referral to a specialist.

CONCLUSION: The existing referral system among FPs and dermatologists, based on the study parameters, is generally properly implemented at the NCR. However, further studies should be done to determine the current state of referral system in the rural areas, where further health care management is needed, due to the unavailability of specialists like dermatologists.

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INTRODUCTION

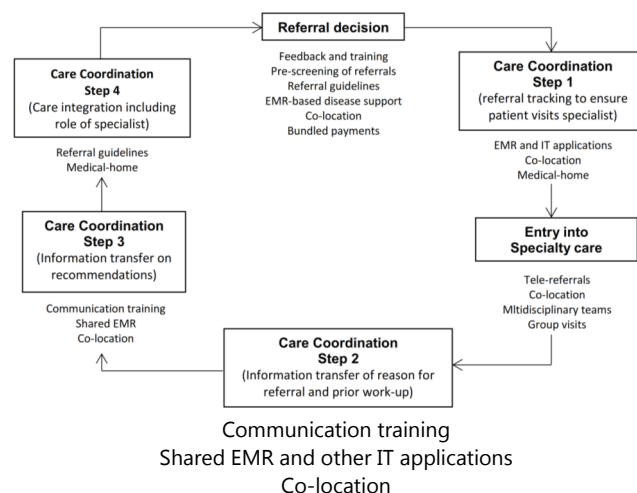
The health care system presents a major challenge in every country. The factors behind this global trend are increasing health costs and diminished returns on healthcare investment for ageing populations. There is growing insight in primary health care in Europe and North America,¹ but data are scarce for many countries, especially in Asia.

The operational framework of health sector reforms in the Philippines was adopted in 2005 and was called FOURmula One for Health (F1). The objective was to undertake critical reforms with speed, precision and effective coordination directed at improving the efficiency, effectiveness and equity of the Philippine health system in a manner that was felt by the Filipinos, especially the poor.²

Based on the Philippine Medical Association Handbook on protocol of 2010, the role of the receiving physicians is that they are bound to acknowledge the referral, state the findings and the plan/ management for the patient.³

While the referring provider can be any type of physician, the focus has been on PCPs.⁴ Family Physicians constitute the largest group of PCPs. Their role as gate-keepers increases the efficacy of the system.⁵ When a patient's condition requires treatment outside of their usual practice, a specialist is typically consulted and works with both the patient and the PCP. In their area of expertise, specialists are more likely to provide evidence-based care, and several studies have shown that specialists' co-management of care thru referrals from PCPs results in better health outcomes for patients.⁶

The conceptual framework for the referral process from primary to specialty care divides the process into three components: referral decision making, care coordination, and access to a specialist (Figure 1).



Notes: EMR= electronic medical record; IT= information technology

Source: Mehrotra A, Forrest CB, Lin CY. Dropping the Baton: Specialty Referrals in the United States. The Milbank Quarterly. 2011; 89(1): 39–68.

Figure 1. Idealized steps in specialty-referral process and potential mechanisms for improvement at each step.

In the Philippines, studies on the current status of referral to dermatologists is lacking. The burden of dermatological diseases is often unrecognized, but since the integumentary system is the largest organ system of the body, then skin problems are generally found to be amongst the most common presentations of diseases in primary care settings in tropical areas.⁷

This study aims to determine the behavior and practices of FPs in the referral of their most commonly encountered dermatological diseases in primary care setting to dermatologists. Specifically, this study also determines their knowledge in dermatological cases, reasons for referral, criteria in choosing a dermatologist, manner of referral, difficulties encountered in referral and patient follow-up.

METHODOLOGY

The research design used was cross-sectional. Study subjects were randomly selected FPs, active members of the Philippine Academy of Family Physicians (PAFP), from the National Capital Region (NCR). The participants were assigned a number by the Head Secretariat of PAFP and all odd numbered were included in the study. The sample population was computed using Slovincs formula based on the population of active PAFP members within the six

NCR chapters (Manila, Quezon City, Makati-Pateros (MATAPAT), Caloocan-Malabon-Navotas (CAMANAVA), Las Pinas-Pasay-Paranaque (LAMPARA) and Pasig-Mandaluyong-Marikina-San Juan (PAMAMARISAN).

A self-made questionnaire was validated by initially sending out 20 questionnaires to randomly selected FPs then results were tallied and found reliable as evidenced by Cronbach's alpha of 0.721. The 500 validated questionnaires were given to the Head Secretariat of the PAFP, and were distributed via email and personally to the active members.

STATISTICAL ANALYSIS

Data were encoded and tallied in the SPSS version 10 for windows. Descriptive statistics were generated for all variables. For nominal data, frequencies and percentages were computed. For numerical data, mean $\pm$ SD were generated.

RESULTS AND DISCUSSION

At the end of the data collection, 156 questionnaires were returned out of the 500 that were initially distributed.

Table 1. Demographic Characteristics of Family Physicians

	Frequency (n=156)	Percentage
Age (in Years)		
≤ 30	9	5.8
31 – 40	44	28.2
41 – 50	32	20.5
51 – 60	50	32.1
61 – 70	4	2.6
71 – 80	6	3.8
> 80	1	0.6
Mean $\pm$ SD = 47.16 $\pm$ 11.77		
Sex		
Male	106	67.9
Female	48	30.8
Years in Practice		
≤ 1	2	1.3
1 – 10	47	30.1
11 – 20	36	23.1
21 – 30	45	28.8
> 30	10	6.4
Mean $\pm$ SD = 3.1 $\pm$ 0.99		
Affiliation		
Private Company	1	0.6
Diagnostic/Medical Center	28	17.9
Government Health Facility	1	0.6
Hospital	88	56.4
Rural Health Center	2	1.2
None	27	17.3

A total of 156 FPs was included in the study. Table 1 shows the distribution of respondents according to demographic characteristics. The age ranged from 27 to 81 years with a mean age of 47.16 years. Out of the 146 FPs, 30.8% were females. Their years of practice ranged from less than a year to 55 years with an average of 3.1 years. More than 50% were affiliated with a hospital.

A substantial amount of the referral variation is attributable to the physician's characteristics, including type of training (e.g., any specialist training), years of experience, diagnosis.¹²

Table 2. Distribution of Family Physicians who took up training in Dermatology

	Frequency (n=156)	Percentage
Took up training in Dermatology		
Yes	31	19.9
No	123	78.8
Took up Dermatology CME/Seminars		
Yes	69	44.2
No	84	53.8

Table 2 shows out of the 156 FPs, 31 (19.9%) took up training in dermatology, however, it was not specified what kind of training was obtained, while 69 (44.2%) took up dermatology continuing medical education (CME)/ seminars.

According to the Philippine Dermatological Society (PDS) Health Information System, out of the 83,586 patients seen from all 11 PDS accredited institutions, the top ten dermatological diseases based on existing cases from January 1 to December 31, 2014 were the following, in descending order: acne vulgaris, scabies infestation, allergic contact dermatitis, atopic dermatitis, verruca vulgaris, seborrheic dermatitis, lichen simplex chronicus, verruca plana, large plaque psoriasis and tinea corporis.

Table 3: Ranking of the Most Commonly seen Dermatological Diseases by Family

Dermatological Diseases	Ranking										Median Rank
	1	2	3	4	5	6	7	8	9	10	
Scabies (n=141)	15 (9.6%)	26 (16.7%)	17 (10.9%)	25 (16%)	17 (10.9%)	13 (8.3%)	8 (5.1%)	6 (3.8%)	7 (4.5%)	2.7 (4.5%)	4
Contact dermatitis (n=149)	53 (34%)	35 (22.4%)	32 (20.5%)	12 (7.7%)	10 (6.4%)	1 (0.6%)	1 (0.6%)	3 (1.9%)	1 (0.6%)	1 (0.6%)	2
Acne vulgaris (n=136)	34 (21.8%)	17 (10.9%)	26 (16.7%)	19 (12.2%)	15 (9.6%)	13 (8.9%)	5 (3.2%)	4 (2.6%)	2 (1.3%)	1 (0.6%)	3
Atopic dermatitis (n=141)	33 (21.2%)	35 (22.4%)	28 (17.9%)	22 (14.1%)	13 (8.3%)	7 (4.5%)	1 (0.6%)	0	0	2 (1.3%)	3
Verucca vulgaris (n=114)	4 (2.6%)	4 (2.6%)	9 (5.8%)	10 (6.4%)	14 (9%)	16 (10.3%)	21 (13.5%)	21 (13.5%)	10 (6.4%)	5 (3.2%)	6.5
Lichen simplex chronicus (n=115)	0	2 (1.3%)	3 (1.9%)	4 (2.6%)	8 (5.1%)	22 (7.7%)	20 (14.7%)	25 (12.8%)	18 (16%)	5 (11.5%)	8
Dermatophytosis/tinea (n=127)	8 (5.1%)	13 (8.3%)	16 (10.3%)	18 (11.5%)	23 (14.7%)	16 (10.3%)	16 (10.3%)	8 (5.1%)	7 (4.5%)	2 (1.3%)	5
Molluscum contagiosum (n=116)	1 (0.6%)	3 (1.9%)	1.2 (1.3%)	1.5 (3.2%)	1.4 (2.6%)	9 (5.8%)	10 (6.4%)	15 (9.6%)	25 (16%)	42 (26.9%)	9
Seborrheic dermatitis (n=138)	7 (4.5%)	14 (9%)	15 (9.6%)	28 (17.9%)	23 (14.7%)	22 (14.1%)	13 (8.3%)	7 (4.5%)	6 (3.8%)	3 (1.9%)	5
Dyshidrotic eczema (n=109)	3 (1.9%)	1 (0.6%)	1 (0.6%)	3 (1.9%)	5 (3.2%)	8 (5.2%)	3 (3.3%)	26 (16.7%)	24 (5.4%)	25 (16%)	8

Table 3 shows the ranking of the most commonly seen dermatological diseases of FPs. Ranking highest was contact dermatitis, followed by atopic dermatitis, acne vulgaris, scabies, dermatophytosis, seborrheic dermatitis and verruca vulgaris. Lowest ranking was given to molluscum contagiosum.

Table 4. Referral of Skin problems to a Dermatologist by Family Physicians

	Frequency (n=156)	Percentage
Refer to dermatological for skin problems		
Yes	142	91
No	14	9

Table 4 shows 91% of the FPs refer to a dermatologist for skin problem. This shows that majority of FPs refer to a dermatologist.

The decision to refer varies widely. Often it is associated with the PCPs decision and factors related to the patient, such as the nature of the presenting problem, the patient's expectations, and the burden of morbidity.¹³⁻¹⁶

Table 5. Distribution of Family Physicians' Reasons for Referral and the Most Prevalent Dermatological Diseases for referral to a Dermatologist

	Frequency (n=156)	Percentage
Reasons for Referral		
Special test	54	34.6
Difficult case	87	55.8
Establish a diagnosis	52	33.3
Second opinion	68	43.6
Treatment	88	56.4
Reassurance of patient	34	25
Reassurance of physician	20	12.8
Others		
Difficult patients	1	0.6
Lesions involving sensitive areas	1	0.6
Dermatological cases for Referral		
Contact dermatitis	24	15.3
Lichen simplex chronicus	21	13.2
Acne vulgaris	24	15.3
Atopic dermatitis	27	17
Dermatophytosis	14	8.6
Difficult cases	23	14.1
Drug reaction	1	1.2
Melanoma	1	0.6
Psoriasis	35	22.1
Skin cancer	2	1.3
Skin diseases not responding to treatment	8	4.8
Verruca plana	1	0.6
Verruca vulgaris	35	22.3
Chronic skin lesions	5	3
Erythema multiforme	1	0.6
Leprosy	5	3.1
Milia	1	0.6
Neurofibroma	1	0.6
Scabies	6	3.8
Seborrheic dermatitis	12	8.2
Folliculitis	1	0.6
Steven-Johnson Syndrome	7	4.4
Xanthelasma	1	0.6
Bullous disease	1	0.6
Drug reaction with eosinophilia and systemic symptoms	1	0.6
Benign nevus	1	0.6
Systemic lupus erythematosus	3	1.9
Vitiligo	2	1.2
Alopecia areata	1	0.6
Basal cell carcinoma	1	0.6
Epidermal cyst	1	0.6
Staphylococcal scalded skin syndrome	1	0.6

Table 5 shows the reasons for referral are "treatment" followed by "difficult case", "second opinion", "special test" and to "establish a diagnosis". The three most prevalent cases for referral to a dermatologist are psoriasis and verruca vulgaris, atopic dermatitis, acne vulgaris and contact dermatitis.

Table 6. Distribution of Family Physicians Referral Frequency to a Dermatologist

	Frequency (n=156)	Percentage
Referral Frequency (Within a Month)		
1x	26	16.7
2x	30	19.2
3x	22	14.1
4x	11	7.1
5x	9	5.8
>5x	5	3.2
Referral Frequency (Within a Year)		
1x	5	3.2
2x	6	3.8
3x	13	8.3
4x	5	3.2
5x	9	12.2
>5x	23	14.7

Table 6 shows the average referral frequency made by FPs. Based on this data, FPs usually refer dermatological cases twice a month and more than five times in a year. Hence, patients with a dermatological disease are frequently seen in their practice.

A successful referral requires that the patient has adequate access to a specialist. The specialist's characteristics, such as his or her perceived medical skill, prior interactions, availability, and whether the specialist is known to return the patient to the referring physician and the community in which the referring physician practices, also influence which specialist is chosen by the PCP.^{17,18}

Table 7. Criteria for choosing a particular Dermatologist by Family Physicians

Criteria	Frequency (n=156)	Percentage
Good Medical Skill	107	68.6
Had a previous referral with the Dermatologist	44	28.2
Related to that dermatologist	6	3.8
Geographic consideration (location)	60	38.5
Patient's request/preference	33	21.2
Good FP-dermatologist communication	52	33.3
HMO-accredited dermatologist	1	0.6
Recommended by other FPs	1	0.6

Table 7 shows that the criteria for choosing a particular dermatologist by the FP are the following: good medical skill (68.6%), geographic consideration (38.5%) and good FP-dermatologist communication (33.3%).

Table 8. Rating of the Quality of Communication between the Family Physician and Dermatologist

	Frequency (n=156)	Percentage
Rating		
Very satisfied	22	14.1
Satisfied	84	53.8
Neutral	37	23.7
Dissatisfied	1	0.6
Very dissatisfied	1	0.6

Table 8 shows the quality of communication between the FP and dermatologist. Twenty-two respondents (14.1%) were very satisfied; 84 (53.8%) were satisfied; and 37 (23.7%) were neutral. One of the FPs was dissatisfied and one was very dissatisfied. This was attributed to the patient's poor compliance because of financial constraints.

Quality of communication between PCPs and specialists is important for the evaluation of the referral system. One study found an eleven-fold increase in the odds of adequate communication between PCPs and specialists sharing an electronic medical record.¹⁹ In other countries, an integrated medical record is used by all medical practitioners. Leading to ease of access and continuity in the management of the patient.

Table 9. Manner of Referral between the Family Physician and Dermatologist

	Frequency (n=156)	Percentage
Manner of Referral		
Text Message	10	6.4
Email (with picture)	2	1.3
Phone call	23	14.7
Referral letter	134	85.8

Table 9 shows the manner of referral between FP and dermatologist. Majority of the respondents 134 (85.8%) referred through referral letters while seven (14.7%) referred thru phone calls and ten (6.4%) referred thru text messages.

Referral tracking is an important task for the referring physician to ensure that the referral was completed.⁴ This is an integral part for the care integration, as well as information transfer. Information technology can ease the transfer of data.^{20,21}

Deficiencies in the referral process have many adverse consequences, including reduced continuity of care, delayed diagnosis or treatment, duplication of testing, poly-pharmacy, and increased risk of malpractice suits.²⁰⁻²³

Table 10. Distribution of Family Physicians who encountered Difficulties in Referring

	Frequency (n=156)	Percentage
Encountered Difficulties		
Yes	7	4.5
No	146	93.6

Table 10 shows FPs who had encountered difficulties in referring patients. Out of the 153 who referred to dermatologists for skin problems, only seven (4.5%) encountered difficulties. The reasons were unavailability of the dermatologist, financial constraint of the patient, patient's refusal, and the patient not being referred back to the PCP.

Table 11. Patient's follow-up to Family Physicians

	Frequency (n=156)	Percentage
Patients Come back after referral?		
Yes	107	68.6
No	37	23.7

Table 11 shows patient's follow-up to FPs. One hundred seven FPs (68.6%) gave a positive response. Patient's follow-up with the primary physician is essential in the care integration. This shows a good referral system between the FP and dermatologist.

CONCLUSION

Dermatological diseases are very common and most patients present in primary care settings. Majority of the FPs refer to dermatologists. Continuing medical education and refresher training courses are important for dermatological disease awareness of FPs.

The most prevalent skin problems referred were psoriasis and verruca vulgaris, atopic dermatitis, acne vulgaris and contact dermatitis. The primary reasons for referral of FPs to a dermatologist were for treatment and difficult cases. The criteria that are highly considered for choosing a particular dermatologist by FPs are good medical skill, geographic consideration and good FP-dermatologist communication. Majority of the FPs referred through letter, followed by phone calls and text messages.

The existing referral system among FPs and dermatologists, based on the parameters included, is generally properly implemented in the NCR.

RECOMMENDATIONS

Despite the importance of specialty referral process, data are lacking on the current status of referral to dermatologists in the country, especially in the rural areas, where further health care management is needed by our fellow countrymen. To secure access to high-quality health care for all, every health system will have to provide strong primary health care as its basis. Hence, proper recording, referral tracking and reporting of cases, especially from the primary care setting, is needed for ease of access and to be able to assess the real status of the dermatological diseases and its management.

Further studies are suggested to determine other deficiencies that can lead to duplicated care, overuse of facilities, and wasting of precious resources that threatened the sustainability of the health system and to identify opportunities for improvement in the referral.

In order to make effective plans for the provision of dermatological services, especially on a national level, the researchers suggest that physicians should follow the model of specialty referral.⁴ Electronic data recording also helps in ease of access

by both the PCP and Specialist. Other countries were able to integrate their medical data in different specialties, hence, further studies should be done to include medical data integration, changing trends in referral, the reasons for requesting a specialist opinion, and whether the referral is influenced by their knowledge on dermatological diseases and its management.

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