

Assessment of the primary care referral system in Iraqi Kurdistan

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Background

- Effective referral system between different levels of health care delivery represents a cornerstone in addressing patients' health needs
- Ideally, the primary health care (PHC) centers are supposed to be the point of first contact of patients.
- From PHC centers referral to the secondary and tertiary levels should follow a timely, smooth and organized process

- The current efforts to reform the health system in Iraqi Kurdistan require data and knowledge about the different aspects of the health system and on the key elements of reform including the referral system.
- There is lack of empirical data on this important key element of health system

Aim

- This study aimed to assess the referral system from the primary care to secondary care and describe the patients' experience with the current health care referral system

Methods

- Cross sectional study on 203 patients referred from 3 main PHC centers in Erbil city to secondary care
- The selected three PHC centers included:
 - Shahid Mohamad Bajalan PHC center
 - Shahid Nazdar Bamarni PHC center
 - Mala Afandi PHC center

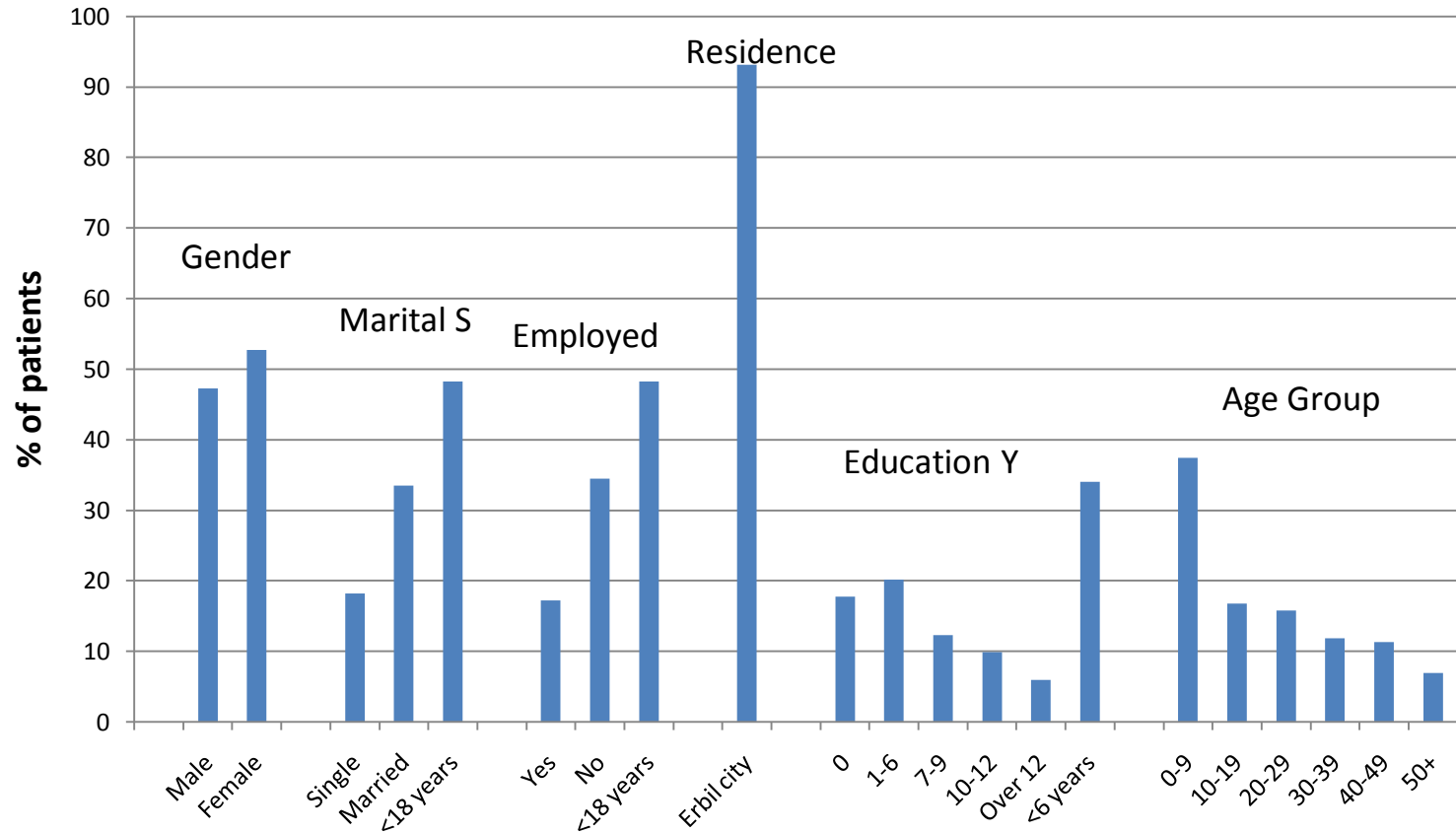
- A questionnaire was administered to these patients to collect data about:
 - Socio-demographic characteristics of the patients
 - Type and reasons for referral
 - Data filled in by referred physicians
 - Referral process and patients' satisfaction with the health service delivery at the secondary care settings
 - Data was collected through follow up telephone interview

Results

- 3318 consultations
- 210 patients referred to the secondary care settings
- Referral Rate 6.3%
 - Shahid Mohamad Bajalan PHC center 9.0%
 - Shahid Nazdar Bamarni PHC center 4.8%
 - Mala Afandi PHC center 6.5%
- 79 patients seen/physician/day (range 13 to 146)
- 5.0 referrals/physician/full practice-day (range 1 to 13)

Socio-demographic characteristics of the respondents (n=203)

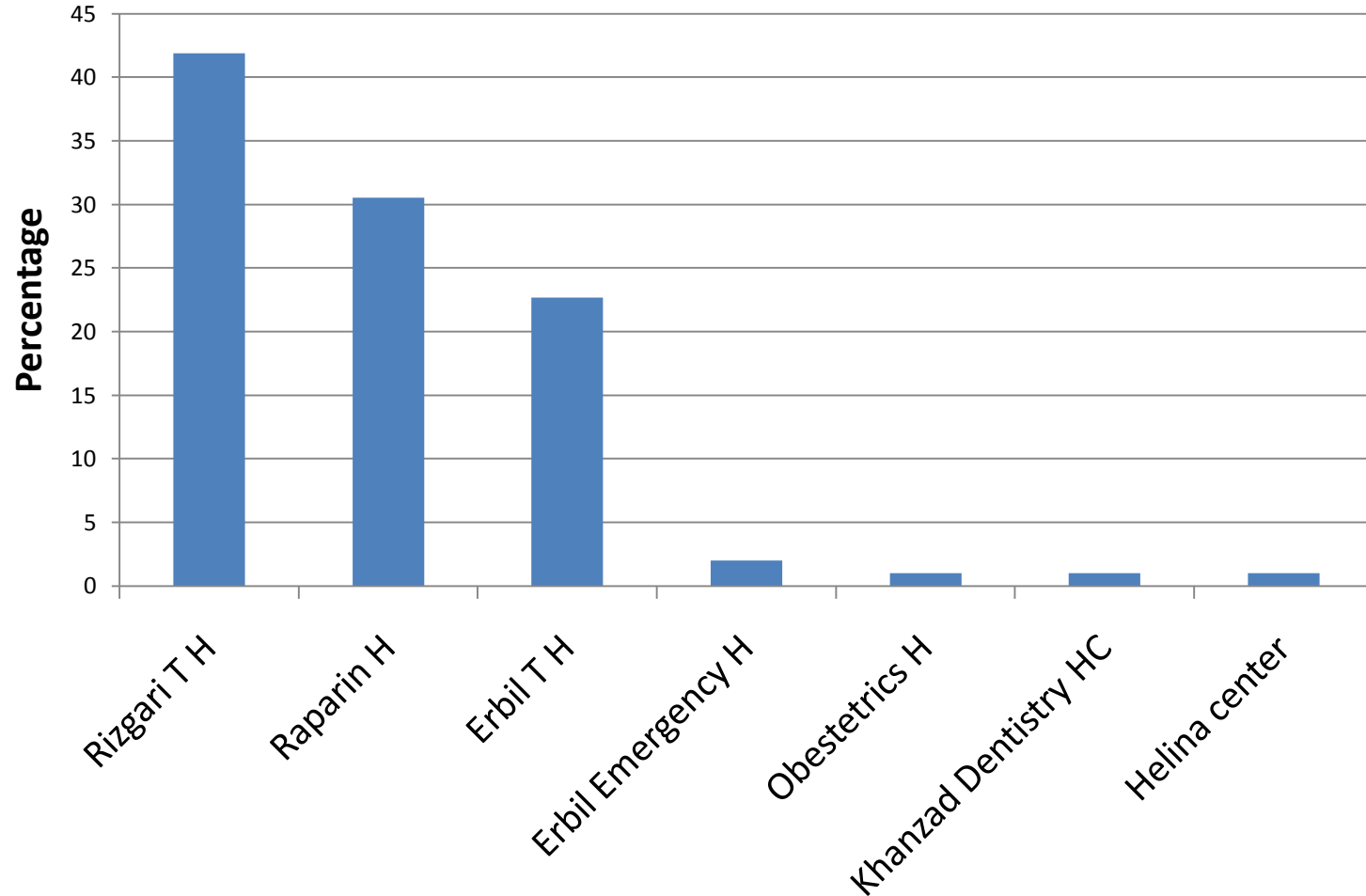
- Out of 210 referral cases, 203 (96.7%) responded



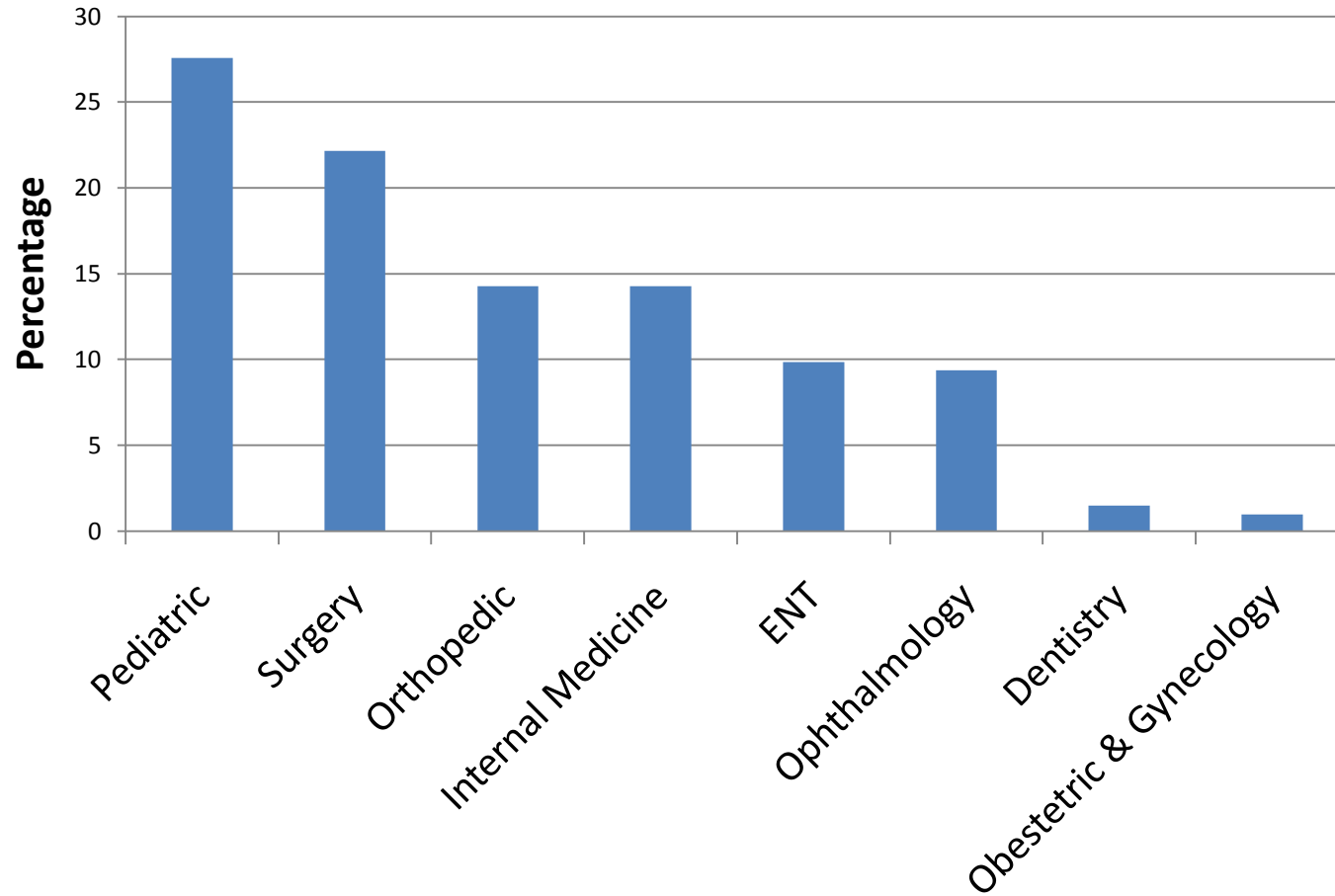
Referral characteristics of the respondents

Characteristic	No.	(%)
Type of referral		
Indicated	133	65.5
Self-requested	70	34.5
Reasons for indicated referral (n=133)		
Need for further management	68	51.1
Lack of specialty in PHC center	52	39.1
Lack of investigations in PHC center	9	6.8
Diagnosis difficulty	4	3.0

Hospital of Referral



Department of Referral



Association between type of referral and socio-demographic characteristics

Characteristic	Type of referral						<i>P value</i>
	Indicated (n=133)		Self-requested (n=70)		Total		
	No.	(%)	No.	(%)	No.	(%)	
Physician type							
Internist practitioner	42	60.0	28	40.0	70	100.0	<i>0.001</i>
General practitioner	32	50.8	31	49.2	63	100.0	
Surgery practitioner	59	84.3	11	15.7	70	100.0	
Gender							
Male	59	61.5	37	38.5	96	100.0	<i>0.249</i>
Female	74	69.2	33	30.8	107	100.0	
Marital status							
Single	27	73.0	10	27.0	37	100.0	<i>0.571</i>
Married	46	67.6	22	32.4	68	100.0	
Employed							
Yes	23	63.9	13	36.1	36	100.0	<i>0.365</i>
No	50	72.5	19	27.5	69	100.0	
Residence							
Erbil city	127	67.2	62	32.8	189	100.0	<i>0.065</i>
Outside Erbil city	6	42.9	8	57.1	14	100.0	

Association between type of referral and referral characteristics

Education (Years of formal education)

0	26	72.2	10	27.8	36	100.0	<i>0.912</i>
1-6	27	65.9	14	34.1	41	100.0	
7-9	16	64.0	9	36.0	25	100.0	
10-12	12	60.0	8	40.0	20	100.0	
Over 12	8	66.7	4	33.3	12	100.0	

Age group

0-9	46	60.5	30	39.5	76	100.0	<i>0.181</i>
10-19	21	61.8	13	38.2	34	100.0	
20-29	26	81.3	6	18.8	32	100.0	
30-39	13	54.2	11	45.8	24	100.0	
40-49	18	78.3	5	21.7	23	100.0	
50 and above	9	64.3	5	35.7	14	100.0	

Hospital of referral

Rizgari Teaching H.	62	72.9	23	27.1	85	100.0	<i>0.274</i>
Erbil Teaching H.	29	63.0	17	37.0	46	100.0	
Raparin H. for pediatrics	38	61.3	24	38.7	62	100.0	

Department of referral

Pediatrics	34	60.7	22	39.3	56	100.0	<i>0.001</i>
Surgery	40	90.9	4	9.1	44	100.0	
Orthopedics	18	62.1	11	37.9	29	100.0	
Internal medicine	18	62.1	11	37.9	29	100.0	
Otolaryngology	6	30.0	14	70.0	20	100.0	
Ophthalmology	16	84.2	3	15.8	19	100.0	

Details of the health problems prompting referral

Health problem	Children (n=87)		Adult (n=116)		Total (n=203)	
	N.	%	N.	%	N.	%
Diarrhea/vomiting	31	35.6	0	0.0	31	15.3
Loin pain	3	3.4	16	13.8	19	9.4
Eye problems	2	2.3	17	14.7	19	9.4
Chest infection	15	17.2	1	0.9	16	7.9
Abdominal pain	3	3.4	10	8.6	13	6.4
Musculoskeletal pain in lower limb	1	1.1	11	9.5	12	5.9
Musculoskeletal pain in upper limb	0	0.0	10	8.6	10	4.9
Backache	0	0.0	10	8.6	10	4.9
Nasal problems	3	3.4	5	4.3	8	3.9
Dermatological problems	1	1.1	6	5.2	7	3.4
Trauma	5	5.7	1	0.9	6	3.0
Congenital defects	6	6.9	0	0.0	6	3.0
Tonsillitis	4	4.6	1	0.9	5	2.5
Chest pain	0	0.0	6	5.2	6	3.0
Ear pain	0	0.0	5	4.3	5	2.5
Head ache	1	1.1	4	3.4	5	2.5
Mass/swelling	3	3.4	6	5.2	9	4.4

Referral process

Characteristic	No.	(%)
Action (n-203)		
Went to referred hospital	202	99.5
Did not go to the referred hospital	1	0.5
In case not going to hospital (n=1)		
Visited paramedic clinic	1	
If going to referred hospital (n=202)		
Went the same day	190	94.1
Went the next day	12	5.9
Waiting time (hours+SD)	1:15	0:34

Patients' satisfaction with the services provided at the secondary care centers

Characteristic	No.	(%)
Satisfaction with service (n=202)		
Very bad	0	0.0
Bad	4	2.0
Fair	58	28.7
Good	137	67.8
Very good	3	1.5
Reasons for dissatisfaction with service (n=35)		
Not satisfied with the given treatment	27	43.5
Overcrowding	24	38.7
Inadequate time given for care	7	11.3
Long waiting time	4	6.5

Conclusion

- This study demonstrates a normal referral rate at primary care level in Erbil city but with a high rate of self-requested referrals.
- The self-requested referrals do not seem to be explained by the socio-demographic characteristics of the patients.
- The findings may be regarded as preliminary to further research into this important area of health system.