Review

Criteria for a good referral system for psychiatric patients: the view from Saudi Arabia

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معايير نظام الإحالة الجيد للمرضى النفسيِّين: رؤية من المملكة العربية السعودية

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الخلاصة: إن تطوير وتشغيل نُظُم إحالة جيدة يعكس وجود تخطيط صحي وطني صارم. ويستعرض الباحثون تقييم المعطيات حول نظم الإحالة، ولاسيَّما الإحالات النفسية، مع إشارة خاصة إلى المملكة العربية السعودية. وقد استخدم الباحثون الحاسوب للبحث عن الأدبيات ذات الصلة بالموضوع خلال العقدين الماضيين. ويختلف معدل إحالة المرضى وعملية إحالتهم بواسطة رسائل الإحالة على مستوى العالم وفي مواقع الممارسة، وهي تتأثر بمصفوفة من العوامل التي ترتبط بمن يستهلك الخدمة الصحية، وبمن يقدمها، وبنُظُم تقديمها. وتعد نُظُم الإحالة، والتي تتضمن خدمات المشاورة والارتباط، من المكونات الأساسية لأي منظمة للرعاية الصحية لتقديم طيف متكامل من الخدمات الصحية التخصصية الرفيعة الجودة.

ABSTRACT The development and implementation of quality referral systems reflects sound national health planning. This review appraised the data on referral systems, in particular psychiatric referrals, with special reference to Saudi Arabia. A computer search was made of relevant literature in the past 2 decades. The rate and process of referring patients through referral letters varies globally across practice settings and is initiated by an array of factors linked with health consumers, health providers and delivery systems. Referral systems, including consultation–liaison services, are an essential component of any health care organization for offering a complete range of good quality, specialized health services.

Critères à respecter pour mettre en place un bon système d'orientation des patients psychiatriques : le cas de l'Arabie saoudite

RÉSUMÉ L'élaboration et la mise en place de systèmes d'orientation de qualité relèvent d'une planification sanitaire nationale judicieuse. Cette étude a évalué les données relatives aux systèmes d'orientation des malades, notamment en psychiatrie et en particulier en Arabie saoudite. La littérature publiée dans ce domaine au cours des deux dernières décennies a fait l'objet d'une recherche informatisée. Le taux et le traitement des patients orientés vers un service spécialisé grâce à une lettre adressée au spécialiste varient globalement en fonction du lieu de soins et cette orientation dépend d'une série de facteurs liés aux consommateurs de santé, aux prestataires et aux systèmes de prestation de soins de santé. Les systèmes d'orientation, notamment les services de consultation-liaison, sont un élément essentiel de toute organisation de soins de santé car ils permettent de proposer une panoplie complète de services de santé spécialisés de bonne qualité.

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Introduction

There are 3 important components of referral systems: the referring physician, the physician referred to and the patient. The process of referring a patient is linked to the patient, the referring physician, the referred physician and the practice setting. A referral encompasses an array of functions: beyond the clinical benefit to the patient there are educational and research-related benefits to the physicians. In the light of the international literature on referral systems, this review article aims to examine different aspects of psychiatric referral systems in Saudi Arabia.

Review methods

In addition to manual searches, a computerized search of the relevant literature using *Medline* was conducted. First, the keyword "referral letters" was used as a qualifier and combined with "psychiatric", "non-psychiatric", "predictors", "psychiatric comorbidity", "physical comorbidity", "primary care", "general hospitals", "specialist hospitals", "consultation–liaison services" and "teaching hospitals". A second search used the keywords "general practitioners", "family physicians" and "attitudes" as qualifiers and combining them with "medical education", "medical disease", "mental disorders", "research", and "stigma". The search yielded numerous peer-reviewed citations published over the 2 decades up to 2004. We looked for empirical studies and review articles that gave a broad picture about: psychiatric and non-psychiatric referral systems at the 3 levels of health care; the consultation process; primary care and hospital psychiatry; and the importance of targeted training for general practitioners (GPs), hospital physicians and allied medical staff. In addition, studies from other Persian Gulf countries concerning psychiatric and non-psychiatric referral systems were critically reviewed.

Referral systems

Background to the referral system in Saudi Arabia

Having realized the importance of a universal referral system, health planners introduced this into the Saudi Arabian health system in 1989 [*1*]. Primary health care centres (PHCCs) were established in both rural and urban areas throughout the country to meet the aim of delivering primary health care (PHC) services equally to all citizens [*2,3*] in accordance with the World Health Organization (WHO) slogan "Health for all by the year 2000" [*4*]. The compact organization of health services and the development of special strategies in rural areas were important parts of the overall strategy because rural populations tend to underutilize health services [*2,3*]. Additionally, each family was registered at a PHCC in the catchment area and received a family health card to assist in follow-up.

Although it remains doubtful whether all people worldwide will have a complete state of health even by the end of the 21st century [*5*], in Saudi Arabia PHC services are well developed and patients with diseases not manageable by PHC physicians are referred to secondary and tertiary levels of care.

Definition and purpose

There are 3 levels to all health care delivery systems: primary or community health care; secondary or general hospitals; and tertiary, specialist or teaching hospitals. At the first level, the PHC team functions as a filter and refers a variety of difficult and severely ill cases to the secondary level [*6*]. The dynamic process of referring a patient begins

for a number of reasons including: a lack of resources in PHCCs; deficiencies in the skills of the PHC team; the characteristics of the patient; and the availability of skilled specialists or consultants to deal with complex cases [*7*]. A referral system essentially incorporates 3 major interrelated and integrated components: the referring physician; the patient; and the consultant referred to.

A referral system requires the following: the referring physician should clearly specify the objectives of referral in the referral letter; the patient should have good compliance and follow the instructions of the PHC physician; and the consultant should interview the patient comprehensively and provide clear feedback to the referring physician. This whole exercise often ends in a successful referral and also provides an important opportunity for mutual understanding, upgrading knowledge and effective learning of all those involved [*2*].

Adequate coordination and meaningful communication between the 3 components of a referral system maximize its efficiency and effectiveness. The incorporation of new information technology in the health care systems further improves the communication network among medical personnel [*8*] towards achieving the best quality of health care service to patients [*2*].

There are many reasons for referring a patient including: problems in diagnosis; the need for investigations; problems with therapy; the need for follow-up; and personal request by the patient [*2*]. The referral system is one of the most effective models for linking and integrating medical services across the 3 levels of care and also contributes to improving medical education and research and the delivery of cost-effective quality care to health consumers.

Primary care psychiatry mainly developed in the industrialized world, where PHC physicians are in a better position to provide psychosocial care to health consumers [*9*]. Several forms of referral, including in-house referrals, ensure that only those patients who are likely to benefit will be referred to a higher level [*10*]. Appropriate options have been developed and considered for the management of minor psychosocial problems within the PHC setting [*11*].

Standards

The standards of practice for referrals from PHC to hospitals are closely related to the resources of the PHCC and secondary/tertiary health care systems and have been described comprehensively elsewhere [*12*] (Al-Jarallah JS, *Quality monitoring manual*, unpublished document, 1994). For the procedure in the Saudi Arabian health system, the referring physician is expected to fill in all items in the referral letter, which also contains multiple feedback items which should be completed by the consultant. The normal Ministry of Health (MOH) referral letter does not have items related to patient's education, marital status, occupation and mental status examination, which are relatively less important for referral of medical patients than psychiatric patients. All PHCCs use the MOH protocol for referring patients to the secondary care level. General hospitals, teaching institutions and the private health sector also use referral protocols, with modifications and variations in the format. Notably, health providers should strictly apply the referral system indicators, procedures and guidelines for streamlining health care services across all practice settings [Al-Jarallah JS, *Quality monitoring manual*, unpublished document, 1994].

Indicators of successful systems in psychiatry

Unlike in other branches of medicine, referral systems in psychiatry are problematic

and complex. A successful referral has certain prerequisites: a fully completed, legible referral letter; a good therapeutic relationship between the physician and the patient; a meaningful discussion of the objectives of the referral with the patient; clarification of any questions raised by the patient; regular follow-ups; minimization of the reported attrition rate of 15%–20%; and good compliance by the patient. In addition, the referring physician should at least contact the consultant referred to, who may seek further information about the patient. A coordination office might further improve the reception of the patient.

The referring PHC physician should include both quantitative and qualitative information in the referral letter as this improves consultant satisfaction [*13*]. Each referred patient should have a minimum wait for the appointment in order to enhance the success rate of the referral process [*14*]. The consultant referred to should also develop a good therapeutic alliance with the patient; evaluate him/her comprehensively; and provide clear guidelines to the patient—all factors that help the PHC physician in effective follow-up and ensure a strong collaboration between the primary and secondary levels of health care [*15*]. The referring physician should carefully review the contents of consultant feedback letters, which should be attached to the patient's file for future reference.

Factors that destabilize a successful referral system and which need to be rectified constantly are: inadequate documentation in the referral; unstructured referral letters; unwillingness to cooperate among health personnel; delay in or no consultant feedback; deficient or inefficient coordination offices; self-referred patients; patient non-compliance; and inadequate resources or logistic facilities at PHCCs and hospitals [*16,17*]. Self-referral by psychiatric patients, a common phenomenon in developing countries, is attributed mainly to deficient psychiatric facilities, including both non-availability of psychotropic drugs and a lack of staff with psychiatric training at PHCCs [*3,16*].

Integration of PHC with mental health care

The WHO proposed linking mental health care with PHC systems in order to provide psychosocial health for all people worldwide [*18*], and this has provided a stimulus to the changing referral pattern of patients from PHC to psychiatry. The advantages of integrating PHC with mental health care are: meaningful communication among health providers, health consumers and health systems; improved health care services; and meeting the needs of psychiatric patients. Studies of patients' needs have prompted the development of need-led organizations for planning relevant services [*19,20*]. In addition, 50% or more of patients with a variety of psychiatric disorders consult PHC doctors, who in the main correctly recognize and treat them. However, both the physicians' recognition rate and the appropriateness of their treatment of psychiatric disorders vary considerably across studies and might be attributed to different study settings, communication styles and diagnostic and therapeutic skills [*7,11,21*].

There is converging evidence that PHC physicians do not identify more than 50% of psychiatric patients, including paediatric patients, many of whom remain untreated [*22*]. In particular, postnatal depression, which affects 10%–15% of women visiting PHCCs, needs to be identified by PHC doctors using the available screening tools [*23*].

The presentation of somatic disorders by psychiatric patients in primary care and hos-

pital settings varies from 20% to 60%, and creates additional diagnostic problems for PHC doctors [*24*]. Medically unexplained somatic symptoms may be comorbid with a variety of psychiatric disorders in all age groups [*25*]. Researchers have proposed remedicalization of medically unexplained symptoms due to dysfunctions of the central nervous system and have also called for integrating "psychiatric" treatments into general medical practice [*26*]. Somatic patients tend to overutilize medical resources in all practice settings leading to higher costs, substantial suffering and greater impairment and disability [*27*].

Problems in diagnosis can be attributed to a number of factors: general physicians are not well trained in psychiatry for diagnosing patients with somatic manifestations because there is a low emphasis on psychiatric teaching in graduate medical courses; the social stigma attached to psychiatry; and the complex nature of psychiatric disorders. Notably, GPs usually demand more from community psychiatric services in carrying out their primary therapeutic role, especially in rural areas.

Besides linking mental health care with PHC, researchers have identified several other models that underlie the concept of integration [*28–30*]: use of shared facilities; administrative, i.e. sharing administrative resources; new practitioner models; independent "carve-outs" (i.e. separating certain types of services or patient groups through a separate managed contract); functionally integrated carve-outs; extended care models; the shared-risk model of capitation; the shifted outpatient model, primarily provided by psychiatrists independent of primary and secondary care teams; the psychiatric community liaison model; the attached mental health professional model; the community mental health team model; Balint groups and education; intermittent psychiatric service provision model; and functional in terms of complete integration of clinical services with staff jointly responsible for patient welfare.

These models have a variety of underlying strategies: referrals, diversification, enhancement, mainstreaming, liaison and collaboration. Overall emphasis of the models is to provide appropriate, cost-effective mental health services to clients in the community towards a better quality of life. Notably, value orientation towards the integration of mental health care into PHC should be introduced during undergraduate health programmes [*29*].

Conversely, managed care (health insurance plans that contract with health care providers and medical facilities to provide care for members at reduced costs) has largely served as a new barrier to effective collaboration and to meeting the mental health care needs of patients [*30*]. This problem is almost non-existent in the Persian Gulf countries where third party payment has yet to be applied.

Predictors of psychiatric referrals to secondary level

By and large, psychiatric services in PHC and general hospitals are not fully developed in the Persian Gulf countries, which is the main reason clients seek consultation at psychiatric hospitals. Other determinants of referrals are patients' perceptions of their own health, patients' personal requests, general physicians' negative attitudes towards mental patients, poor outcomes of previous treatment, unclear diagnoses, somatic presentations, comorbid conditions, presentation of major depression and acute anxiety disorders, high current symptoms ratings (i.e. patients with polysymptoms involving multiple body organs), serious psychotic mental disorders, organic brain disorders and mental retardation, incompetent patients (i.e. patients with severe psychiatric

disorders unable to give consent for medical procedures), and service acceptance criteria for appropriate referrals [*14,25,31*].

The health provider factors in psychiatric referrals are delayed admission, lack of communication with referring physicians and prestigious hospitals, and fund-holding practices. Fund-holding in general practice is reported to make little difference in increasing the efficiency and effectiveness of health care at the primary–secondary care interface, but waiting times for the first appointment with the specialist have been shown to be reduced [*32*]. The on-site presence of mental health professionals determines the referral rate of patients to secondary care [*33*].

Psychiatric symptoms determine the referral process of mental patients to a higher level of care. The pattern and severity of symptoms varies with the health care system and medical comorbidity [*34,35*]; for example, patients referred from PHC tend to have less severe symptoms than patients referred from general hospitals. Other predictors of psychiatric referrals applicable to paediatric settings [*22*] are: the patient's demographic variables; the patient's stressful life events; coordination between for example PHC and mental health institutions; and the patient's religious affiliations, social networks and social groups [*36*].

As there are many predictors of psychiatric referrals, the rate of referral varies considerably. Kessel in 1960 was probably one of the first to report that 10% of patients in general practice are referred to psychiatrists [*37*], and other reports have estimated this rate from 5% to 50% [*38*]. The variation in rates of referrals might be attributed to different patterns of morbidity in the population; different study settings; different patterns of drug prescriptions; varying competency of physicians; and different provision of mental health care services.

The timing of referrals also varies; high social vulnerability has been linked with late referral and a severe level of psychiatric dysfunction has been associated with early referral [*38*].

Primary care psychiatry and referrals

Unlike industrialized countries where community psychiatry is well organized, all the Persian Gulf countries face challenges, especially in the development and delivery of mental health services at community level. Although the estimated prevalence of psychiatric disorders in PHC and general hospitals is projected to be > 60%, there is no adequate provision of mental health care services to patients with a variety of psychiatric disorders, minor psychosocial problems and comorbid disorders [*35,38*], and most of the patients could be managed by the PHC system. However, it is important to note that primary care psychiatry is not specialist psychiatry in general practice [*39*] and there is no room for complacency as psychiatric conditions in PHC can be persistently disabling. For example, patients with chronic psychosis often require specialist mental health care services and only a minor proportion are treated by GPs [*40*], although community psychiatric nurses can deal with them effectively [*41*]. With the lack of mental health care services in primary care in the Persian Gulf countries, most patients identified with psychiatric morbidity are referred to the secondary level [*42*] and about 45% of unidentified patients are not referred and hence continue to suffer from disabling conditions [*43*].

Not all patients with psychiatric disorders in Saudi Arabia consult PHC clinics: many visit psychiatric hospitals, psychiatric clinics in general hospitals or faith healers [*36*], indicating that the projected prevalence of psychiatric disorders in PHC or general

hospitals is not a true reflection of the level of psychiatric morbidity in the community [*44*]. Provision of quality mental health care in the community requires community consultation–liaison psychiatry services, psychiatric training for physicians and links with public mental health care services, all factors that have been found to significantly improve the detection of mental illness and its treatment by physicians. However 19% of patients requiring continuing care show low satisfaction with PHC services and hence need referral to a community mental health team [*45,46*]. Overall, all Persian Gulf countries need to develop primary care psychiatry as a priority for meeting patients' psychiatric needs.

General hospital psychiatry and referrals

There is converging evidence that outpatients and inpatients of all ages attending general hospital as well as teaching hospitals suffer from a wide variety of psychiatric disorders and need psychiatric referral and evaluation [*47–49*], bearing in mind that the behavioural problems of children need to be addressed only in paediatric settings. The varied, complex presentations of psychiatric disorders in PHC and general hospital psychiatry calls for the use of modified versions of international classifications of diseases [*50*]. There are many reasons for psychiatric consultations within the general hospital, usually originating from medical departments [*51,52*]. In one study the estimated prevalence of psychiatric morbidity in patients referred from general hospitals to the psychiatric service was 30%–68% [*47*], which is not congruous with epidemiological figures and could be due to different study settings. Likewise, the referral rate within general and teaching hospitals is variable and ranges between 0.7% and 20% [*51,53*]. Notably, normal pregnant women were also reported to manifest psychiatric symptoms, and only 23% of them received psychiatric treatment [*54*].

Although the sociodemographic data of referred versus non-referred patients within general hospitals tends not to vary, some studies have reported that single, female patients with poor psychosocial functioning are more often referred for psychiatric consultations [*31*].

Implications of psychiatric comorbidity

The presence of comorbid psychiatric disorders among diverse medical patients have several implications for the planning and organization of consultation–liaison services across all practice settings: patients' excessive use of health resources; increased length of stay; huge financial burdens; increased functional impairment and disability; complicated recovery; requirement for special hospital staff; bad prognosis and poor outcome; poor perception of quality of life; and specific integrated treatment approaches [*53,55,56*]. For example, medical patients with chest pain have been shown to have psychiatric disorders coupled with poor outcomes and social disability [*57*], which directly correlates with an increasing number of somatic symptoms. Alternatively, physical ill health also has an adverse impact on outcome of care for patients with psychiatric disorders [*58*]. During natural disasters, victims with medical/surgical problems may get tremendous benefits from psychiatric triage [*59*] and the referral pattern shifts from purely psychiatric work to a collaborative, primary model.

Mechanisms underlying comorbidity

There exists an association between physical and psychiatric disorders and the underlying mechanisms are not properly understood, although several plausible theories have

been proposed. These include: comorbid disorders are an array of medical disorders causing psychological distress (distress model); comorbid disorders are not distinct entities but the expression of phenotypic variability of the same disorder; comorbid disorders are distinct and separate clinical entities that just occur concurrently; comorbid disorders share genetic or psychosocial or both vulnerabilities (diathesis model); an etiologically genetic relationship between cancer and stresses (stress model); comorbid disorders represent a genetically distinct subtype within a heterogeneous disorder; one syndrome is an early manifestation of the comorbid disorder; and one syndrome increases the risk of the comorbid disorder becoming manifest [*27,35,60*]. Psychiatric disorders might be the consequence of drugs that the patients use for the treatment of medical disorders. Common immunological factors may also mediate the emergence of both psychiatric disorders and physical diseases [*61*]. Researchers have found that the psychiatric sequelae of bereavement such as traumatic grief, rather than the stress associated with bereavement per se, determines which bereaved individuals will develop mental and physical morbidity [*62*]. Finally, psychiatric disorders may be a maladaptive reactive response to fatal medical diseases.

In summary, psychiatric comorbidity affects referral trends, research and clinical practice because of its influence on the epidemiology, phenomenology, etiology, diagnosis, treatment, prognosis and outcome of a case.

Consultation–liaison psychiatry and referrals

Consultation–liaison psychiatry, shaped by psychosomatic and psychoanalytical theories in the early 1930s through the 1950s, is an important model for the collaboration of psychiatry with medical and surgical services in the community. It aims to deliver cost-effective, comprehensive mental health care services to inpatients and outpatients across practice settings [*63*]. The consultation–liaison psychiatrist establishes a dialogue with the referring physician and conducts an interview with the referred patient informing him/her of the objectives of the consultation. The consultation–liaison psychiatrist focuses mainly on the corroboration of the patient's history and clarifies relevant questions and writes a patient consultation report for future reference and follow-up. Following evaluation of the patient, the consultation–liaison psychiatrist offers psychotropic and non-psychotropic therapies, and may also hospitalize or refer the patient for psychiatric outpatient follow-up. The consultation–liaison psychiatrist focuses primarily on the quality of life of health consumers in a patient-oriented model.

The consultation–liaison psychiatric service embraces both the medical consultant model (single discipline) approach and the complex, community mental health team (multidisciplinary) approach [*64*]. Other responsibilities of the consultation–liaison psychiatrist are: psychiatric training of PHC and hospital physicians and allied staff; supervision of daily case groups and quality management meetings; lecturing on selected topics; offering tutorials in research techniques; presentation of literature reviews; holding case conferences; and streamlining liaison meetings requested by general hospital specialists and consultants [*63,64*].

Quality of psychiatric referrals

Like any other branch of medicine, the concepts and assessment procedures of quality assurance in psychiatry have been developed worldwide [*65*], and do not vary

much from other medical specialties. The determinants of quality in psychiatric referrals and services in the industrialized countries [*12,66*] have been identified as: the patient's socioclinical characteristics; the quality of the referring doctor; aspects of the setting and structure of referral letters; availability of good psychiatric services at referred psychiatric institutions; and proper communication between the doctor and the patient [*67*]. The rate of utilization of resources, the location of PHC, standardized referral letters and the availability of psychiatric services could also affect the quality of referrals. The referring physician's initial direct contact with the referred consultant also has a positive impact on the quality of referrals and the feedback response from consultations.

Conflicts may arise during the interactive communications among health providers and consumers that need to be resolved by ethical guidelines [*68*]. Market forces and the financial incentives offered by health authorities would also determine the quality of psychiatric referrals. Writing good quality referrals is important in many ways including in particular good quality of patient care and good quality of consultant feedback [*69*].

Studies on non-psychiatric and psychiatric referrals in Saudi Arabia

There are 10 studies in Saudi Arabia that have addressed issues of the referral system in PHC and general hospitals and identified some difficulties associated with referral systems, including structural, procedural and technical issues [*1,2,70–78*]. All the studies were of non-psychiatric referrals only and made more or less similar recommendations: the need to carry out comprehensive comparative studies in rural and urban PHCCs; the need to improve communication between the PHC system and secondary care level; the need for additional training of the PHC team as a part of their inservice training to be able to diagnose and deal with patients' complaints; making certain that the PHC team has access to and knowledge of the required diagnostic and treatment technology; and the need for an educational programme for patients to inform them about their rights and obligations with respect to the expectations of the PHC team and the specialist.

Conversely, there are only 2 early studies [*79,80*] and some later studies [*81–83*] that have explored the diagnostic and sociodemographic characteristics of psychiatric patients referred by GPs to a PHC psychiatric clinic and psychiatric consultations in teaching hospitals, respectively. Although these studies were prospective, they suffered from several limitations, including small sample size and exploration of only the demographic and diagnostic parameters of referred patients.

Consequently our team carried out a series of related studies on psychiatric referrals originating from PHC and general hospitals in Al-Qassim region [*16,34,35,69,84*]. The sample common to all of 5 studies was a random selection of 540 photocopied psychiatric referral records, 402 from PHCCs and 138 from general hospitals. These were extensively reviewed to compare selected referral issues: the adequacy/inadequacy of data noted in referrals; psychiatric symptoms and diagnosis recorded; psychiatric comorbidity; the determinants of quality of psychiatric referrals; and the pattern of psychotropic drug prescribing by psychiatrists to these referred patients.

The analysis showed that the age and sex of referred patients were not significantly associated with the 2 main sources of referrals [*16*]. Although PHCC letters were quantitatively deficient in clinical information, the completeness of letters

between the 2 referral sources did not differ significantly. Comparison of general hospital referrals with PHCC referrals revealed statistically significant clinical findings and physical comorbid conditions. A higher proportion of diagnoses noted in general hospital referrals as compared to PHCC referrals significantly matched with final diagnoses made by referred psychiatrists. Psychiatric referrals from both settings needed further improvements in the quantity and quality of data notation in referral letters, and the referring physicians needed more training in the psychiatric referral system and clinical psychiatry.

A comparative description of the psychopathological symptoms as noted in PHCC and general hospital referrals showed that functional psychotic, mood and psychosomatic symptoms were significantly greater in general hospital referrals compared to PHC referrals, while the latter had significantly more somatic and neurological symptoms [*34*]. Only a small proportion of PHC referrals (8%) had symptoms of childhood psychiatric disorders. It was concluded that psychiatric symptoms differed in PHC and general hospital settings and that physicians working in both practice settings needed to complete the referral letters comprehensively.

Another study in the series compared comorbid psychiatric and physical disorders noted in referral forms from PHC and general hospitals [*35*]. Fifteen general hospital patients but no PHC patients were referred for admission. Psychiatrists made more diagnoses of dementia, affective and anxiety disorders, mixed anxiety/depression, and somatoform disorders than did clinicians and GPs. Clinicians made significantly more diagnoses of acute psychosis and somatoform disorders than did GPs. Physical morbidity was noted in 38.4% of general hospital and 17.2% of PHC referrals. It was concluded that general hospital and PHC psychiatry should be further developed in Saudi Arabia.

Another study modelled the determinants of quality in psychiatric referral letters, linked to the features of the referred patient, the referring physician and the practice setting [*69*]. Data were derived from patient files, physician training records and 540 psychiatric referrals regarding 18 independent variables underlying 3 latent constructs and 1 dependent variable (quality scores of the psychiatric referral letters). Structural equation modelling was used to analyse this data for examining proposed causal relationships between the quality of psychiatric referral letters and the potential predictors. Structural equation modelling revealed a reasonably good fit of the proposed model to the data. The tested model explained 67% of the variance in the quality of psychiatric referral letters. The characteristics of the referring physician (experience, education and psychiatric training) and features of the referral setting (nature of the setting and administrative information in referral letters) were highly significant indicators of the quality of psychiatric referral letters, which in turn was negatively predicted by patient features (including severity of the mental illness). Despite some caveats, the quality of psychiatric referral letters was accurately predicted by 3 latent constructs: referring physician's skills; the nature of the setting; and patient's socioclinical features.

A further strand to the analysis compared psychotropic drug prescriptions by psychiatrists to PHC and general hospital patients referred to a mental health care facility. The data collected from these 2 sources were also compared with previously published data on psychotropic drug prescribing for psychiatric outpatients. The results showed that several antipsychotic and anticholinergic drugs were prescribed

significantly more often to general hospital referred patients, while antidepressants and anticonvulsants were prescribed more often to patients referred from PHC. However, the prescribed dosages of these psychotropic drugs did not vary significantly between general hospital and PHC referred patients.

Multiple psychotropic drugs were prescribed significantly more often to general hospital patients compared to PHC patients, who received relatively less non-psychotropic intervention. On the other hand, antipsychotics, antidepressants and benzodiazepines were prescribed more often to general hospital and PHC referred patients compared to psychiatric hospital outpatients, who had significantly more prescriptions for anticonvulsants and anticholinergics. It was concluded that psychotropic drug prescribing differs between PHC and general hospital referred patients. The physicians working at the 2 settings needed training in psychotropic drug prescribing so that they could deal competently with patients presenting with a variety of psychiatric disorders. For comprehensive details about these studies and GP training programmes, readers are referred to another source [*85*].

Conclusion

Primary care or community psychiatry, general hospital psychiatry and consultation–liaison psychiatry practice are well developed in the industrialized world and innovative mental health care delivery strategies are constantly being devised, which is not the case in the Persian Gulf countries. Here, primary health care psychiatry is in the early stages of development and a network of community mental health care centres is yet to be established in Saudi Arabia. Conversely, general hospital psychiatry is in slightly better shape. For example, there are 16 general hospitals in Al-Qassim health province and 3 of them have psychiatric clinics run by consultant psychiatrists, specialists and resident doctors, who provide outpatient services as well as consultation–liaison services to referred patients in different wards of the hospital. However, the majority of general hospitals have no admission facilities for psychiatric patients. Almost all academic teaching institutions in Saudi Arabia have psychiatric consultation–liaison services together with admission facilities, but most lack specialized consultation services for paediatric, intellectually disabled and geriatric patients. Similar trends are probably prevalent in other regions of Saudi Arabia and other Persian Gulf countries. In the light of this background, the authors suggest that priority should be given to establishing PHC and general hospital psychiatric services, including consultation–liaison services in the Persian Gulf countries. This would help in providing complete health care, including mental and social, to all people with psychosocial problems.

Finally, this literature review informs us that besides ensuring excellent clinical practice, rapidly developing countries need to think about continuing medical education, psychiatric training programmes for professional development, streamlining referral systems (including developing structured referral letters, developing psychiatric consultation–liaison services at 3 health delivery levels), and conducting relevant research.

References

1. Al-Mazrou YY et al. A preliminary report on the effect of referral systems in four areas of the Kingdom of Saudi Arabia. *Annals of Saudi medicine*, 1991, 11:663–8.
2. Al-Amri AH et al. A descriptive study of referral letters in three rural primary health care centers in Al-Qassim region, Kingdom of Saudi Arabia. *International journal of health education*, 1997, 35:87–90.
3. Qureshi NA et al. Strategies for enhancing the use of primary health care services by nomads and rural communities in Saudi Arabia. *Eastern Mediterranean health journal*, 1996, 2:326–33.
4. Passmore R. The Declaration of Alma-Ata and the future of primary care. *Lancet*, 1979, 2:1005–8.
5. Ashorn P, Kulmala T, Vaahtera M. Health for all in the 21st century? *Annals of medicine*, 2000, 32:87–9.
6. Verhaak PF. Determinants of the help-seeking process. Goldberg and Huxley's first level and first filter. *Psychological medicine*, 1995, 25:95–104.
7. Aoun S, Underwood R, Rouse I. Primary mental health care in a rural community: patient and illness profiles, treatment and referral. *Australian journal of rural health*, 1997, 5:37–42.
8. Førre S et al. Utproving av standard-henvisning i Sor-Trondelag [Testing of a standard referral form in Sor-Trondelag]. *Tidsskrift for den norske laegeforening*, 1999, 119:2201–3.
9. Boerma WG, Verhaak PF. The general practitioner as the first contacted health professional by patients with psychosocial problems: a European study. *Psychological medicine*, 1999, 29:689–96.
10. Maggs-Rapport F, Kinnersley P, Owen P. In-house referral: changing general practitioners' roles in the referral of patients to secondary care. *Social science & medicine*, 1998, 46:131–6.
11. Morgan DG. "Please see and advise": a qualitative study of patients' experiences of psychiatric outpatient care. *Journal of social psychiatry and psychiatric epidemiology*, 1999, 34:442–50.
12. Burbach JR, Harding S. GP referral letters to a community mental health team: an analysis of the quality and quantity of information. *International journal of health care and quality assurance*, 1997, 10:67–72.
13. Tanielian TL et al. Referrals to psychiatrists: assessing the communication interface between psychiatry and primary care. *Psychosomatics*, 2000, 41:245–52.
14. Grunebaum M et al. Predictors of missed appointments for psychiatric consultations in a primary care clinic. *Psychiatric services*, 1996, 47:848–52.
15. Spiessl H et al. Was erwarten Hausarzte von einer psychiatrischen Klinik? Wunsch nach engerer Zusammenarbeit [What do general practitioners expect from a psychiatric clinic? Wish for closer cooperation]. *Fortschritte der Medizin*, 2000, 142:183–6.
16. Qureshi NA et al. An analysis of psychiatric referrals, Saudi Arabia. *Arab journal of psychiatry*, 2001, 12:53–65.
17. Brown LM, Tower JE. Psychiatrists in primary care: would general practitioners welcome them? *British journal of general practice*, 1990, 40:369–71.
18. *The introduction of a mental health component into primary health care*. Geneva, World Health Organization, 1990.
19. Cheah YC et al. Development of a measure profiling problems and needs of psychiatric patients in the community. *Journal*

of social psychiatry and psychiatric epidemiology, 1998, 33:337–44.

20. Lefebvre J et al. Unmet needs in the community: can existing services meet them? *Acta psychiatrica scandinavica*, 2000, 102:65–70.

21. Bijl RV, Ravelli A. Psychiatric morbidity, service use, and need for care in the general population: results of The Netherlands Mental Health Survey and Incidence Study. *American journal of public health*, 2000, 90:602–7.

22. Briggs-Gowan MJ et al. Mental health in pediatric settings: distribution of disorders and factors related to service use. *Journal of the American Academy of Child and Adolescent Psychiatry*, 2000, 39:841–9.

23. Lee DT et al. Screening for postnatal depression using the double-test strategy. *Psychosomatic medicine*, 2000, 62:258–63.

24. Altamura AC et al. Prevalence of somatoform disorders in a psychiatric population: an Italian nationwide survey. Italian Collaborative Group on Somatoform Disorders. *European archives of psychiatry and clinical neurosciences*, 1998, 248:267–71.

25. Wilkinson P, Bolton J, Bass C. Older patients referred to a consultation–liaison psychiatry clinic. *International journal of geriatric psychiatry*, 2001, 16:100–5.

26. Sharpe M, Carson A. "Unexplained" somatic symptoms, functional syndromes, and somatization: do we need a paradigm shift? *Annals of internal medicine*, 2001, 134:926–30.

27. Kessler RC et al. Impairment in pure and co-morbid generalized anxiety disorder and major depression at 12 months in two national surveys. *American journal of psychiatry*, 1999, 156:1915–23.

28. Mechanic D. Approaches for coordinating primary and specialty care for persons with mental illness. *General hospital psychiatry*, 1997, 19:395–402.

29. Selig S. Integrating health and mental health: opportunities in undergraduate health programs. *Health values*, 1986, 10:9–13.

30. McNeil GN. The collaboration between psychiatry and primary care in managed care. *Psychiatric clinics of North America*, 2000, 23:427–35.

31. Vinamaki H et al. Factors predictive of referrals to psychiatric hospital among general hospital psychiatric consultations. *Acta psychiatrica scandinavica*, 1998, 97:47–54.

32. Redfern J, Bowling A. Efficiency of care at the primary–secondary interface: variations with GP fund-holding. *Health and place*, 2000, 6:15–23.

33. Bower P, Sibbald B. Systematic review of the effect of on-site mental health professionals on the clinical behavior of general practitioners. *British medical journal*, 2000, 320:614–7.

34. Qureshi NA et al. Psychiatric referrals: in primary care and general hospitals in Qassim Region, Saudi Arabia. *Saudi medical journal*, 2001, 22:619–24.

35. Qureshi NA et al. Psychiatric co-morbidity in primary care and hospital referrals, Saudi Arabia. *Eastern Mediterranean health journal*, 2001, 7:492–501.

36. Qureshi NA et al. Traditional cautery among psychiatric patients in Saudi Arabia. *Transcultural psychiatry*, 1998, 35:75–83.

37. Kessel WIN. Psychiatric morbidity in a London general practice. *British journal of preventive and social medicine*, 1960, 14:16–22.

38. De Jonge P et al. Timing of psychiatric consultations: the impact of social vulnerability and level of psychiatric dysfunction. *Psychosomatics*, 2000, 41:505–11.

39. McQueen AR. Primary care psychiatry is not specialist psychiatry in general practice. *Medical journal of Australia*, 1999, 171:278.

40. Kendrick T et al. Are specialist mental health services being targeted on the most needy patients? The effects of setting up special services in general practice. *British journal of general practice*, 2000, 50:121–6.

41. Bruce J et al. Dedicated psychiatric care within general practice: health outcome and service providers' views. *Journal of advanced nursing*, 1999, 29:1060–7.

42. Al-Jaddou H, Malkawi A. Prevalence, recognition and management of mental disorders in primary health care in Northern Jordan. *Acta psychiatrica scandinavica*, 1997, 96:31–5.

43. Al-Haddad MK et al. Psychiatric morbidity in primary care. *Eastern Mediterranean health journal*, 1999, 5:21–6.

44. Verhaak PF et al. GPs' referral to mental health care during the past 25 years. *British journal of general practice*, 2000, 50:307–8.

45. Hansson L et al. The course of psychiatric illness in primary care patients. A 1-year follow-up. *Journal of social psychiatry and psychiatric epidemiology*, 1994, 29:1–7.

46. Harrison J. Prioritizing referrals to a community mental health team. *British journal of general practice*, 2000, 50:194–8.

47. Martucci M et al. Evaluating psychiatric morbidity in a general hospital: a two-phase epidemiological survey. *Psychological medicine*, 1999, 29:823–32.

48. Uwakwe R. Psychiatric morbidity in elderly patients admitted to non-psychiatric wards in a general/teaching hospital in Nigeria. *International journal of geriatric psychiatry*, 2000, 15:346–54.

49. Wiss M et al. La pedopsychiatrie de consultation–liaison intrahospitaliere : etude prospective sur 215 interventions [Child consultation–liaison psychiatry within the hospital: a prospective study]. *Archives de pediatrie*, 2004, 11:4–12.

50. Lamberts H et al. The classification of mental disorders in primary care: a guide through a difficult terrain. *International journal of psychiatry medicine*, 1998, 28:159–76.

51. Adeyemi JD. In-patient psychiatric referrals in a teaching hospital: a case controlled report. *Journal of psychosomatic research*, 1996, 41:427–33.

52. Al-Ansari EA et al. Patterns of psychiatric consultations in Kuwait General Hospital. *General hospital psychiatry*, 1990, 12:257–63.

53. Freyne A et al. Consultation liaison psychiatry within the general hospital: referral pattern and management. *Ireland medical journal*, 1992, 85:112–4.

54. Kelly RH, Zatzick DF, Anders TF. The detection and treatment of psychiatric disorders and substance use among pregnant women cared for in obstetrics. *American journal of psychiatry*, 2001, 158:213–9.

55. Katon W, Sullivan M, Walker E. Medical symptoms without identified pathology: relationship to psychiatric disorders, childhood and adult trauma, and personality traits. *Annals of internal medicine*, 2001, 134:917–25.

56. Lespérance F, Frasure-Smith N. Depression in patients with cardiac disease: a practical review. *Journal of psychosomatic research*, 2000, 48:379–91.

57. Kisely SR. The relationship between admission to hospital with chest pain and psychiatric disorder. *Australian New Zealand journal of psychiatry*, 1998, 32:172–9.

58. Schmidt NB, Teich MJ. Non-psychiatric medical comorbidity, health perceptions, and treatment outcome in patients with

panic disorder. *Health psychology*, 1997, 16:114–22.

59. Rundell JR. Psychiatric issues in medical-surgical disaster casualties: a consultation–liaison approach. *Psychiatry quarterly*, 2000, 71:245–58.

60. Verhaak PF. Somatic disease and psychological disorder. *Journal of psychosomatic research*, 1997, 42:261–73.

61. Cohen P et al. Prospective associations between somatic illness and mental illness from childhood to adulthood. *American journal of epidemiology*, 1998, 147:232–9.

62. Prigerson HG et al. Traumatic grief as a risk factor for mental and physical morbidity. *American journal of psychiatry*, 1997, 154:616–23.

63. Friedman RS, Molay F. A history of psychiatric consultation in America. *Psychiatric clinics of North America*, 1994, 17:667–81.

64. Lloyd GG, Mayou RA. Liaison psychiatry or psychological medicine. *British journal of psychiatry*, 2003, 183:5–7.

65. Gaebel W. Qualitatssicherung in der Psychiatrie. Konzept—Methodik—Durchfuhrung [Quality assurance in psychiatry. Concept—methodology—implementation]. *Nervenarzt*, 1995, 66(7):481–93.

66. Spencer A. Using consumer feedback to improve services. *International journal of health care and quality assurance*, 1996, 9:29–33.

67. Van den Brink-Muinen A et al. Doctor–patient communication in different European health care systems: relevance and performance from the patients' perspective. *Patient education and counselling*, 2000, 39:115–27.

68. Stinson MS. Conflicts in consultation. *Journal of the South Carolina Medical Association*, 1996, 92:14–7.

69. Qureshi NA et al. Quality of psychiatric referrals in Saudi Arabia: a structural equation modeling approach. *Neurosciences journal*, 2007, 12(1):53–61.

70. Al-Jarallah JS. The quality of referral letters in two health centers in Riyadh. *Saudi medical journal*, 1991, 11:658–62.

71. Referral to hospitals. In: Al-Mazrou YY, Al-Shehri S, Rao M, eds. *Principles and practice of primary health care*. Riyadh, Saudi Arabia Al-Helal Press, 1990:269.

72. Mahfouz AAR et al. Referral system in the Asir region, Saudi Arabia: a study on hospitals' referral coordination offices. *Saudi medical journal*, 1993, 14:237–9.

73. Al-Amoud M. Analysis of poor referral letters. *Saudi medical journal*, 1994, 15:354–7.

74. Khoja TAM et al. Pattern of referral from health centers to hospitals in Riyadh region. *Eastern Mediterranean health journal*, 1997, 3:236–43.

75. Al-Soweilem LS, Mangoud AM. Evaluation of antenatal referrals from health centers to the maternity and children's hospital in Dammam city, Saudi Arabia. *Journal of family and community medicine*, 1996, 3:22–8.

76. Badawi I, Khattab M, Campbell J. Referral rates and patterns in primary care department, Khamis Mushayt, Saudi Arabia. *Saudi medical journal*, 1998, 19:157–61.

77. Jarallah JS. Referral from primary care to hospitals in Saudi Arabia: 1. Quality of referral letters and feedback reports. *Journal of family and community medicine*, 1999, 5:15–22.

78. Al-Qahtani DA, Imtiaz ML. An analysis of referral from primary care. *Saudi medical journal*, 2004, 25:671–3.

79. El-Rufaie OEF. Referrals by general practitioners to a primary health care psychiatric clinic: diagnostic status and

sociodemographic characteristics. *Arab journal of psychiatry*, 1995, 6:82–92.

80. El-Rufaie OEF. A psychiatric clinic in primary care setting: evaluating the experience. *Saudi medical journal*, 1988, 9:20–4.

81. Al-Sughayir MA. Referral pattern of physical diseases in psychiatric in-patients. *Saudi medical journal*, 2000, 21:864–8.

82. Al-Habeeb TA. Psychiatric referrals within the teaching hospital: a comparison with general hospital and primary care psychiatry referrals, Saudi Arabia. *Journal of family and community medicine*, 2002, 9:57–66.

83. Alhamad AM. Pattern of gastroenterology psychiatric consultations: a prospective study. *Saudi medical journal*, 2004, 25:1284–6.

84. Qureshi NA et al. Psychotropic drug prescriptions in primary care and general hospitals, in Saudi Arabia. *Saudi pharmaceutical journal*, 2001, 9:193–200.

85. Qureshi NA. *Psychiatric referral in the Al-Qassim region, Saudi Arabia: the role of general practitioners* [PhD thesis]. Faculty of Social Sciences, Erasmus University, Rotterdam, the Netherlands, 2004.