



REVIEW ARTICLE

The multi-disciplinary arena of psychosomatic medicine – Time for a transitional network approach



C. Leue^{a,b,c,*}, M.A. van Schijndel^{d,e}, D. Keszthelyi^{f,g}, G. van Koeveeringe^{c,h},
R.W. Ponds^{a,b}, R.G. Kathol^{i,j,k}, B.P. Rutten^{a,b}

^a Department of Psychiatry and Neuropsychology, Maastricht University Medical Centre, Maastricht, The Netherlands

^b School for Mental Health and Neuroscience (MeHNS), Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands

^c Pelvic Care Centre, Maastricht University Medical Center, Maastricht, The Netherlands

^d Department of Psychiatry, Rijnstate Hospital, Arnhem, The Netherlands

^e Department of Psychiatry, Erasmus University Medical Center, Rotterdam, The Netherlands

^f Division of Gastroenterology-Hepatology, Maastricht University Medical Center, Maastricht, The Netherlands

^g School for Nutrition and Translational Research In Metabolism (NUTRIM), Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands

^h Department of Urology, Maastricht University Medical Center, Maastricht, The Netherlands

ⁱ Cartesian Solutions Inc., Burnsville, MN, United States

^j Department of Internal Medicine, University of Minnesota, Minneapolis, United States

^k Department of Psychiatry, University of Minnesota, Minneapolis, United States

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Abstract

Background and objectives: Diverse disciplines, ranging from medical psychology to general hospital psychiatry and somatic specialties, are involved in efforts to understand psychosomatic conditions and to advocate multi-disciplinary management. Depending on the kind of problem, its acuity, severity and complexity, patients present at different settings. We aim to give examples of existing integrated care approaches at diverse health care settings and to depict obstacles to and benefits of that care. Furthermore, perspectives to overcome shortcomings concerning the organization of integrated care are outlined.

Method: Narrative review.

Results: This review describes obstacles to integrated psychosomatic care and delineates integrated medical and behavioural health services, ranging from the inpatient medical hospital setting to primary care. Benefits, shortcomings and aspirations of integrated care are drawn, suggesting that a transitional network approach might bridge the gap between medical disciplines and settings, within the medical hospital and back to primary care.

* Corresponding author.

E-mail address: c.leue@mumc.nl (C. Leue).

Conclusions: Various medical and behavioural health service models deliver integrated care. Research mainly focused on collaborative care in primary care. There are uncertainties about the effectiveness of primary care-based interventions targeting somatic complexity and severity in multi-conditional patients. Uncertainties remain, for instance, in cancer or cardiovascular disease with comorbid psychiatric disorders. Furthermore, current evidence does not support the use of primary caregivers in cases of functional somatic symptoms. Given that care transition is a vulnerable moment in health care, a transitional network approach using staff-guided case managers could bridge the gap between medical hospital disciplines and primary care, possibly having impact of societal relevance.

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Background

Psychosomatic medicine is a multi-disciplinary arena, embracing health care and both fundamental as well as clinical research, where different medical specialties explore the interrelationship between bodily processes and social, psychological and psychiatric factors. Clinical courses of mental processes affecting medical outcomes and, vice versa, somatic processes influencing mental well-being constitute the main field of interest. Attempts to distinguish between purely physical or solely mental disorders have become obsolete; almost all somatic diseases are known to be affected by mental factors concerning susceptibility, onset, clinical presentation and treatment adherence, and mental illness is associated with somatic pathways.¹⁻³ Diverse clinical disciplines, ranging from medical psychology to general hospital psychiatry and psychosomatics, to neurology, internal medicine, surgery, including various somatic subspecialties, are involved in the effort to understand the physiological pathways in psychosomatic conditions and, at least in an ideal world, to advocate multi-disciplinary management. Depending on the kind of problem, its acuity, its severity as well as its complexity, patients present at different medical settings. In order to gain a clinical overview of the complexity in psychosomatic conditions, an integrated approach to care is frequently warranted.

Objective

This review aims to narratively give examples on integrated care approaches at diverse health care settings where patients present themselves with somatic complaints and psychiatric comorbidity (i.e., primary care and the medical hospital). Furthermore, obstacles to and benefits of integrated care are depicted with regard to the different settings. Last but not least, perspectives to overcome current shortcomings concerning the organization of psychosomatic integrated care are outlined.

Results

Obstacles on the road to integrated psychosomatic care

Integration of care (i.e., bringing together diverse specialty skills and expertise concerning health care in cases of multi-morbidity with comorbid psychiatric and somatic disorders) remains a difficult process in psychosomatic medicine as well as in the broader medical field. Whereas the aspiration to integrate medical and mental health care is widespread, integrated somatic and mental health care services are hard to find yet, although steps have been made.⁴⁻⁶ The obstacles that hinder integrated team-wise approaches are diverse, largely due to old-fashioned concepts of the separate reimbursement of care. Refund of delivered health care activities has worldwide (from low to high income countries) been segregated in medical and mental health care policies for decades.⁷⁻⁹ The still existing financial dichotomy between medical and mental health care creates competing interests in patients where no distinction between mental and somatic care should be made.⁹⁻¹¹ Effective management of psychosomatic complexity is one of the most important health-related challenges facing patients, health professionals and society, since the cost of health care and the frequency of utilization will rise almost exponentially when additional comorbid conditions are present.^{12,13} Although a robust body of evidence demonstrates the efficacy and cost-effectiveness of integrated care models, particularly for comorbid medical and affective conditions, cost-savings mostly accrue to the health insurance companies alone instead of to the providers of primary or hospital-related integrated care. In addition, financial incentives to implement evidence-based models for improving care should be offered to integrated care providers.¹⁴ Till now, a "silo" structure of medical disciplines and research teams within health care institutions has persisted, hindering efficiency and effectivity in patient's clinical care, isolating areas of expertise, which in turn leads to the separation of clinical from scientific expertise. In this context, jointly submitted collaborative research grants may help overcome competing specialty-related research interests with regard to

multi-conditional health care in order to prevent treatment refractoriness.¹⁵

Besides joint funding, organizational aspects of integrated care models should be taken into account in order to deliver care successfully.^{16–18} The presence of a multi-disciplinary team is an indispensable condition for a successful integrated care service.¹⁹ Furthermore, shared clinical protocols and a specialty-transcending information system (with electronically accessible patient files) have to be available. Co-located work environment would be the ideal arrangement for co-operating services. If not feasible, liaison services operating bi-directionally would be needed to approach the patient. In order to guarantee clinical expertise on a consultant level, navigators (medical staff) and ‘steersmen’ (care managers) should deliver guidance on the clinical course, either face-to-face with patients and/or caregivers or via digital information transferred to patients and their care managers. In addition, well-operating integrated teams should conduct multi-disciplinary research in order to evaluate their clinical practice.¹⁹ Last but not least, a multi-component strategy should include efforts to combat stigmatization.²⁰ The stigma attached to chronic conditions and especially to mental disorders has historically been one of the major obstacles to the realization of effective health care. Stigma-related obstacles range from attitudes of patients and caregivers that hamper their compliance, to treatment adherence and the willingness to conceptualize shared mechanisms across mental and somatic illness and comorbidity issues in multi-conditional problems.^{20,21} Moreover, stigmatization is probably the main reason for the persistence of rigidly separated systems of health care and reimbursement. For more than a century, the rationale for isolating mentally ill patients from the community has lain in the behavioural disturbances in psychiatric disorders, which have been relegated to the domain of psychiatric hospitals.²¹

Against the background of today’s obstacles with regard to psychosomatic care, health care organization at the medical-psychiatric interface is truly a clinical challenge. A major concern, and one that hinders the implementation of new care models, is that a tremendous investment of time, money and sustained caregivers’ efforts is required to develop and establish changes in care over the long run.^{14,22} On the other hand, given the innovations in psychosomatic medicine, integrated care in psychosomatics delivered various solutions across a continuum of settings, from complex inpatient medical intervention to primary care.

Integrated care in the Medical Hospital

Med-Psych-Units: re-inventing the past or fine-tuning the future?

In a medical/surgical inpatient setting, psychiatric comorbidity is associated with excess health care costs derived from hospitalization frequency and duration of admissions.^{23–25} The fact that this comorbidity is not generally recognized leads to medically unexplained physical symptoms with subsequent frequent care utilization, which indicates a need for integration of clinical care at the inpatient consultation-liaison level and the level of inte-

grated Med-Psych-Units (MPUs).^{23,25} The benefit of taking an integrated approach is the capacity to detect comorbidity and to initiate multi-disciplinary treatment.²⁶ In cases of multi-conditional patients with the most complex medical status who frequently utilize the facilities, it may be advisable to channel admissions through MPUs instead of providing inpatient treatment at mono-disciplinary wards. There is preliminary evidence that MPUs improve a number of outcomes for medical inpatients with psychiatric conditions.^{23,27} This suggests that integrated inpatient psychosomatic treatment is conducive to a favourable course for symptoms of mental illness with a somatic component.^{23,28–30} However, the development of integrated care at MPUs appears to be context-dependent. In rural areas of the US, for example, MPUs do not have a significant impact on psychosomatic care. This observation makes sense since collaborative approaches are feasible in primary care for comorbid patients, even over long distances, with regard to the care givers’ communication.^{31,32} Another reason why collaborative care (CC) deserved priority in the US had to do with the political circumstances behind the introduction of health care insurance for everyone. This political decision was implemented in the ‘Affordable Care Act’, which at first glance appears to encourage cheap and effective solutions.¹⁴ However, focus on integrated care at the primary care level in psychiatric and somatic comorbidity makes sense for every industrialized country with exploding health care budgets. The fact is, more patients receive treatment for mental disorders by general practitioners (GPs) than in the mental health specialty setting.³³ This is also the case in the Netherlands (NL); at the level of primary care, a ‘general module for somatic and psychiatric comorbidity’ was initiated in co-operation with the Dutch associations of Internal Medicine, Psychiatry and General Practitioners, an initiative that has recently been finalized.³⁴ Additionally, unlike the situation in the US, the development of MPU-related integrated care did not stop in NL. At the moment, approximately 40 MPUs are operational here, starting with two MPUs in the late 1990s and still growing nationwide.³⁵ Moreover, ‘MPU field standards’ have been published and evaluated along with a ‘general module for hospital psychiatry’.^{35–37} There are various reasons why NL promotes integrated primary care and hospital-based approaches. The Netherlands is a densely populated and highly urbanized country where complex multi-conditional patients in need of hospital care are clustered in cities, coinciding with access to ‘high tech’ care in general hospitals.³⁸ Furthermore, the most complex severely ill patients and, therefore, those who frequently utilize health care facilities, may not be cured by primary care-based CC alone. Research suggests a lack of evidence or even an absence of efficacy in certain diseases regarding physical well-being.^{39,40} Given the present barriers, including insufficient training or interest among primary care providers in managing comorbid mental disorders, it might be worthwhile to implement and develop integrated care models at every level of care, including the general hospital inpatient level. The effort could help close some gaps in research and clinical management concerning the most cost-intensive multi-conditional patients.^{41–44}

Pro-active integrated consultation-liaison services to compensate for short hospital stay

Almost 50% of all inpatients at general hospitals have a diagnosable psychiatric disorder and are frequently in need of care.⁴⁵ The number of potentially referred inpatients would put far too much burden on integrated care in the clinical MPU setting due to its limited capacity.²³ This alone is a good reason for pro-active integrated consultation-liaison (CL) solutions that guide patients from inpatient to outpatient settings or into primary care. Overall, CL services (CLS) can provide helpful first treatment and may be cost-effective when involved early in the hospital stay, and if referrers followed protocol-based recommendations.^{46,47} However, there is a need for research on navigation and standardized guidance by and of the staff.^{48,49} It is critical to initiate consultation in a timely manner, since the length of hospital stay is correlated with the amount of time that elapses from admission to the moment of first contact with this service.⁵⁰ So, why are physicians at the hospital not referring their patients to psychosomatic CLS in time? Procedures and both patients, and referrers play a role in the delay of referral, but there are systemic factors as well. One of these can improve the rate of timely referrals, namely a dedicated, encouraging and pro-active CLS. A referrer factor that decreases the number of referrals is the individual's psychological discomfort with psychiatric or psychosomatic CLS, which makes a proactive and engaging communication with medical referrers a relevant issue.⁵¹ Furthermore, given the short stay on medical wards, the lack of opportunity for behavioural observations must be compensated somehow.²³ Bio-psychosocial health risks and the patients' unmet clinical needs should be assessed and integrated treatment should be planned right from the moment of admission. A practical tool for planning these steps is the INTERMED method.⁵² This instrument is available as a self-assessment tool and quickly detects which inpatients have complex medical conditions and whether integrated case management can start as early as possible – whereas complexity risk factors are not typically uncovered during standard medical procedures.^{52,53} An appropriate time and place to use the INTERMED instrument could be upon the first presentation of comorbid medical-psychiatric patients at the hospital's emergency department (ED) or at the outpatient setting.⁵⁴ Staff interviews revealed scenarios in which comorbid mental illnesses or related factors led to misdiagnosis, delayed treatment or even serious adverse events. Factors leading to misattribution in this regard include (i) patients' complex presentation, (ii) their challenging behaviour, (iii) pressure due to the crowded ED environment, and last but not least, (iv) the stigmatizing attitude of some staff members.⁵⁵ In that light, some recommendations are in order to optimize diagnosis and treatment of multi-conditional patients with medical and psychiatric comorbidity at the ED. In the first place, it is advisable to have a psychiatric CL team available 24 h a day, which obviously does not fall under standard care in all general hospitals. Secondly, it is advisable to prepare detailed multi-disciplinary guidelines for the assessment and treatment of intoxicated patients by both the psychiatric CL and the ED staff in medical hospitals. Thirdly, the hallmark of integrated multi-disciplinary management would be to hold

regular multi-disciplinary meetings with staff members of all departments involved.⁵⁶ With regard to the subsequent transition back to primary care at the end of a hospital stay, there is evidence that the GPs' concordance with CLS' recommendations may be enhanced by direct communication between the hospital and the primary care providers.⁵⁷ This evidence concurs with in-hospital findings that a more proactive CLS involvement may prevent comorbid patients from going unrecognized.^{23,58}

Integrated day care and outpatient psychosomatic treatment

Research into integrated psychosomatic care involving different medical specialties on a day hospital basis is scarce. In some countries psychosomatic hospitals provide multimodal psychotherapy programmes for inpatients whereas they focus on mental health care outcomes for the day care setting too. Although there are differences between inpatients and patients at the day care facility, in particular regarding their degree of physical impairment and severity of affective conditions, no differences are found for these treatment modalities when comparing their effectiveness, at least at the level of reduction of depressive symptomatology.^{59,60} This suggests that patients with milder somatic conditions may be equivalently treated for affective complaints in the day clinic setting compared to what they would receive as inpatients. Comparable results were found for depressed elderly patients, denoting a reduction in their overall health care utilization because the costs for day hospital treatment are lower than for inpatient care.⁶¹ This indicates that integrated day care treatment might also have a positive influence on somatic symptom burden or somatic treatment adherence and efficacy.

Psychosomatic medicine is increasingly practised in the outpatient setting too. In part, that may be due to the long waiting lists for psychotherapy in private practices after completion of inpatient psychosomatic rehabilitation, at least in some countries.^{62,63} The effects of outpatient-based psychotherapy (PT) generally show favourable pre-post differences in terms of the reduction of work-disability days, hospitalization days and overall inpatient costs a year after PT.^{63,64} Hence, there is a need for instant linking between somatic and mental health care outpatient settings since integrated outpatient care improves outcome.⁶⁵ Furthermore, there is also a need for co-ordinated participation of medical specialties according to their profile of medical expertise in psychosomatic outpatient care.⁶⁶ In that context, especially in cases of high symptom severity or an early indication of treatment-resistance, there is a role for tertiary care at a university hospital in psychosomatic outpatient care.^{62,66,67} As in the medical hospital inpatient setting, the INTERMED may help to identify case severity and complexity in outpatient care as well.⁵⁴ Given the pleiotropic situation in psychosomatic conditions, outpatient care should be organized as a multi-disciplinary team effort to prevent unsatisfactory outcomes or treatment refractoriness.⁶⁸ This could be of societal relevance, at least for mood disorders in outpatients with chronic physical conditions.⁶⁹

Integrated care in the primary care setting

The best evidence for the performance of psychosomatic integrated care comes from primary care. There are various models for jointly supported treatment trajectories involving GPs and medical consultants. One of these is the model of mental health care consultation for GPs delivered by mental health specialists (psychiatrists, psychologists, nurse practitioners).^{70,71} Yet, despite the high prevalence of mental illness – almost 25% of the population will suffer from a psychiatric disorder at some point during the lifetime, and most of these people receive treatment for mental disorders in primary care – many patients remain undetected and consequently untreated.⁴⁴ Part of the explanation may lie in the somatic presentations of underlying disturbances in emotion regulation that are not instantly attributed, for instance, to anxiety or mood disorders by general practitioners (and specialists).⁶⁸ In order to raise detection rates for mental illness, it is therefore essential to involve primary caregivers. In the model of mental health care consultation for primary caregivers, GPs play a pivotal role in care delivery, with the mental health care consultant supporting their position. A primary care-based consultation-liaison model improves patients' adherence to treatment and their satisfaction with it, and by extension the model improves mental health.⁷¹

On the other hand, there is some evidence that the consultation-liaison model is not as effective as primary care-based collaborative care, particularly when dealing with symptoms of psychiatric disorders and general health status.^{44,71} Collaborative care (CC) as co-ordinated case management, which is delivered by a medically supervised nurse in co-operation with the patients' general practitioner and a navigating psychiatrist, improves affective and chronic disease states in multiple conditions.^{31,32} Moving case managers (CMs) into the frontline of treatment rather than offering mental health consultation to GPs alone or providing care as usual may lead to advantages with regard to combined somatic and mental health care trajectories. CMs, who spend more time with the patient than GPs, may evoke better engagement, compliance and treatment adherence, a performance which eventually translates into a better outcome and favourable economic evaluations.^{31,44,72} Comparable results of CC have been achieved in patients with mental and physical multi-morbidity outside the US, notably in European urbanized areas, with regard to decreased depressive symptoms and anxiety as well as improved self-management of chronic diseases.^{73,74}

Although collaborative care for depression is effective and illness burden may improve in patients with chronic physical conditions,^{75,76} some uncertainty remains about the effectiveness of primary care-based interventions targeting multi-morbidity.^{39,40,77} Especially in patients with severe somatic conditions, CC did not significantly reduce the occurrence of major adverse somatic events.⁴⁰ Moreover, as multi-conditional or frequently utilizing patients present themselves at in- and outpatient hospital settings, there is a need to target integrated care, by means of CC, to address disease severity and complexity in the general hospital setting too. Given that collaborative care has successfully been applied in primary care and research settings, the initial steps have been taken to embed the CC model in the

daily routine of outpatient medical hospital settings.^{78,79} For example, collaborative depression care for people with cancer has shown efficacy concerning their affective condition and has proved to be (cost-) effective.^{79,80} As a collaborative care-based multi-component programme, trained cancer nurses and supervising psychiatrists collaborate with the oncology team and the general practitioner. So, for depressed cancer patients, an outpatient-based expansion of CC towards specialty care settings has already taken place. 'Cancer nurses' established a therapeutic relationship with the patients and provided problem-solving therapy and behavioural activation under the supervision of psychiatrists at either the cancer centre or primary care clinics. Psychiatrists gave advice on pharmacotherapy to GPs and offered them direct consultations if their patients did not improve. Depressed cancer patients were enrolled in the programme from the cancer centres and associated primary care clinics, without stratification of the CC per setting. Thus, application of the CC model for depression in cancer patients provides some new evidence on the use of collaborative care in outpatient medical specialty settings.^{79,80} Another example of the introduction of CC into somatic specialty care is a programme to improve the detection and treatment of affective disorders in patients admitted to cardiology inpatient units at a university medical centre.⁸¹ Patients received a multi-component inpatient intervention. Besides education and treatment recommendation by specialists, it involved treatment initiation during the hospital stay followed by a phone-based evaluation including care co-ordination with the primary care physician. Post-discharge follow-up was of low intensity: each patient had three care manager (i.e., social worker) contacts under the supervision of a team psychiatrist. Overall, an improvement in mental health-related quality of life was achieved. Although there were no differences in overall costs compared to usual care, CC was associated with a significant increase in quality-adjusted life-years.^{81,82} The question arises whether staff-guided interventions by psychosomatically trained nurse practitioners or physician assistants would have yielded bigger effect sizes, especially if initiated during hospital stay. Nevertheless, CC might be a potentially cost-effective long-term treatment for depression in patients with comorbid diabetes or cardiovascular disease.⁸³

Benefits, shortcomings and aspirations of integrated care in psychosomatic medicine

As set forth above, studies providing evidence of integrated care in the hospital setting, including inpatient, day- and outpatient care, are sparse but encouraging. Existing research has mainly involved collaborative care in primary care or research settings.^{77,78} Most CC studies focused predominantly on affective conditions as the primary outcome. In this context, CC is effective concerning the reduction of the bothersome mental ill-health burden, although the achieved improvements are small for some conditions.⁸⁴ In addition, CC tends to be at least cost-neutral or can even lead to modest cost-effectiveness.^{78,82,83}

However, there are still some uncertainties about the effectiveness of primary care-based interventions targeting somatic aspects in multi-conditional patients, especially with regard to complexity and severity. These uncer-

tainties remain in 'hard-core' somatic conditions (e.g., cancer, cardiovascular disease, etc.) with comorbid psychiatric disorders as well as in medically unexplained physical symptoms associated with affective or somatoform conditions.^{39,84,85} Moreover, the current evidence does not support the use of 'frontline' primary caregivers in cases of functional somatic symptoms. The benefit may be confined to more intensive interventions with regard to change of functional outcome. Well-known bottlenecks in primary care are the limited consultation time, lack of skills, the need for a degree of diagnostic openness, and patients' resistance towards psychosomatic attributions.⁸⁵ Hence, there is a role for hospital-based integrated care approaches, since the momentum is building for a much wider collaboration than in primary care-based CC or with hospital-based CL services alone. This momentum is fed by the growing recognition of comorbid somatic and psychiatric disorders, their frequency, poorer treatment outcome and greater costs of care.^{85–87} Realizing that the integration of care remains aspirational, the British King's Fund published a report to address shortcomings.^{5,88} This report describes practical considerations, both the barriers to and the facilitators of integrated care.⁸⁸ It is noteworthy that integrated care goes beyond the colocation of services. In order to achieve an integration of medical and mental health care, cultural barriers which separate organizational and payment-related factors for physical and mental care have to be overcome.^{5,88} Policy developments, like the Affordable Care Act in the US and the National Health Service's Five Year Forward View in the UK, prepared the ground in industrialized countries to facilitate integration of care.^{4,89} However, leadership for change at both the clinical and board levels is still necessary to enable further innovations in the medical system and its participating organizations, namely medical hospitals, primary caregivers and mental health care services (MHC-services) including psychiatric hospitals.

Thus, there is a need for MHC-services to be as well funded as medical health care services and to provide care that is as good as physical care. In order to extend that level of care, it is necessary to deliver care as an integrated part of all health care services.⁵ To support this integration, research is needed that focuses on the identification of multi-conditional patients (including psychiatric comorbidity), on their unmet clinical needs, and on their outcome in relation to different integrated care approaches.^{63,68,72} Multi-disciplinary investigations should incorporate all settings where patients present themselves initially or repetitively with somatic and comorbid psychiatric complaints, from primary care to various levels of medical and psychiatric hospitals.^{5,68,90} In addition, research should facilitate the involvement of medical and paramedical disciplines in multi-morbidity care. Such involvement should include staff-guided care managers, for instance physician assistants, nurse practitioners, psychologists, and if appropriate (i.e., for non-medical concerns) social workers.^{89,91–94} Moreover, integrated care and related scientific research could recognize and identify patients' natural organ-related symptom attribution but paradoxically might also overcome treatment refractoriness related to fragmented health care in multi-morbidity.⁶⁸ Furthermore, integrated care should respect clinical and economic interests of various specialty caregivers involved in psy-

chosomatic medicine, which could paradoxically have the societal impact of reducing cost. Therefore, integrated care would best be construed as a virtual transitional network instead of co-located medical services. In light of the complexity and severity of medical conditions,⁶⁸ the introduction of a transitional medical-psychiatric-network (Med-Psych-Net) might contribute to the integration of psychosomatic care across different settings without violating the diverse and sometimes contradictory interests in the field. Starting from the medical hospital perspective, integrated care should focus predominantly on the most complex and/or severe multi-conditional patients, including psychiatric comorbidity, since comorbid affective conditions usually go unrecognized at medical services and somatoform conditions are not sustainably treated in primary care.^{25,68,85} Notably, the affective multi-morbidity pattern is even present in functional somatic diseases with comorbid somatoform disorders which, if undetected and therefore untreated, contributes to frequent utilization of care.^{23,68,95,96} A Med-Psych-Net should be a virtual network of co-operating care givers who are treating patients with psychosomatic conditions, referring them from primary care to the general hospital and vice versa. Care givers involved in this integrated approach provide treatment in different proportions depending on the severity and complexity of the disease. Patients with most severe conditions could be admitted to the integrated hospital inpatient unit (Med-Psych-Unit) or to somatic wards in co-operation with the mental health care consultation-liaison service. Patients with less impairment but whose medical and/or bio-psychosocial problems are still severe should be followed on a general hospital day care or outpatient basis. Given that care transition is the most vulnerable moment in health care,⁹⁷ transition of the patient back to primary care would take place at suitable moments when the roles of the case manager and general practitioner become more prominent. As mentioned above, moving CMs into the frontline of treatment may lead to advantages concerning combined somatic and mental health care trajectories. They may spend more time with the patient and, therefore may evoke better engagement, compliance and treatment adherence. Moreover, using CMs to accompany the patient in order to combine specialties and bridge settings may lead to a warm handover in care management instead of getting patients lost in the care transition. This in turn may translate into better outcomes and favourable economic evaluations^{31,44,72} (see Fig. 1).

Although observational clinical data are not suitable for identifying causal inference in psychiatric and somatic comorbidity, naturalistic research on integrated care that recognizes clinical complexity might help to understand and treat pathways of mental ill-health which amplify somatic disease and symptom formation.^{23,68,98} Therefore, a clinical network approach based on etiologic medical concepts might help to establish integrated care by connecting specialty wards and outpatient clinics in the medical hospital. This network might also bridge the gap between the hospital and primary care via medical staff-guided (i.e., navigators) transitional care managers (i.e., steersmen) without compromising the quality of consultants' etiologic conceptualization of treatment.^{19,68} What has gone wrong in contemporary academic and clinical

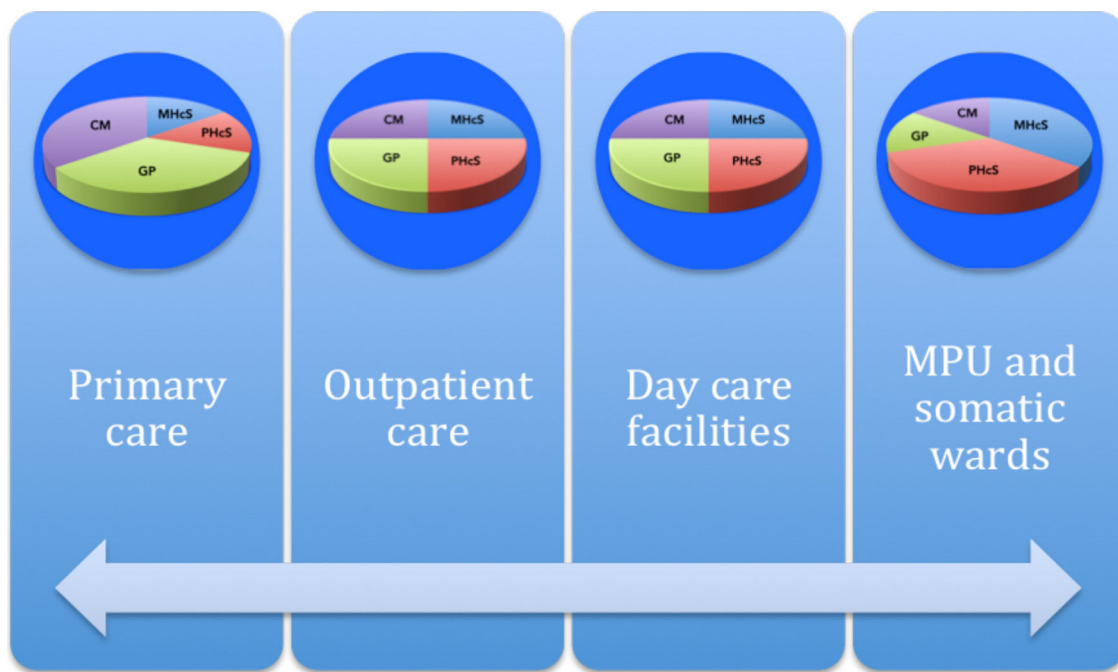


Figure 1 The *Med-Psych-Net* – a transitional network approach fostering personalized care in psychosomatic medicine. A *Med-Psych-Net* (MPN) is a network of co-operating care givers who are treating patients with psychosomatic conditions, referring them from primary care to the medical hospital and vice versa. Care givers involved in this integrated approach provide treatment in different proportions depending on the severity and complexity of disease. Patients with the most severe conditions are admitted to the integrated hospital inpatient unit (*Med-Psych-Unit* (MPU)) or to somatic wards in co-operation with the mental health care consultation-liaison service (CLS). Patients with less impairment but whose medical and/or bio-psycho-social problems are still severe are followed on a day care or outpatient basis. Transition of the patient between specialties or back to primary care takes place at suitable moments when the roles of case managers (CM) and general practitioners (GP) become more prominent. PHcS: Physical Health care Specialist; MHcS: Mental Health care Specialist.

psychiatry, e.g., checklist-style amalgamation of symptoms taking place of thoughtful diagnosis, might be corrected by integrated care leading to transdiagnostic approaches in diagnosis and treatment, and distinct disease-related etiologic nosologies.^{15,99–101} Eventually, transitional integrated care relying on a better biopsychosocial and physiological understanding might protect physical health in patients with mental illness and vice versa mental wellbeing in patients with somatic diseases, which in turn is indeed of societal relevance.^{38,102–105}

Conclusions

This narrative review describes multi-disciplinary integrated health care approaches incorporating settings where patients present themselves initially or repetitively with somatic and comorbid psychiatric complaints, from primary care to the various levels of the medical hospital. Research mainly focused on collaborative care in primary care or research settings. However, there still are uncertainties about the effectiveness of primary care-based interventions targeting somatic aspects, especially with regard to complexity and severity in multi-conditional patients. These uncertainties remain in somatic conditions, such as cancer or cardiovascular disease, with comorbid psychiatric disorders. Furthermore, the current evidence does not support the use of primary caregivers in cases of severe functional somatic

symptoms. Given that care transition is the most vulnerable moment in health care, a transitional network approach (i.e., *Med-Psych-Net*) using staff-guided case managers may add value to fragmented specialty care and bridge the gap between medical disciplines and settings, within the medical hospital and back to primary care. This review certainly has limitations and lacks comprehensiveness concerning integrated care in the specialty mental health setting, especially concerning severe mental illness and associated treatment, which has been meta-reviewed and commented recently.¹⁰² However, a *Med-Psych-Net* approach could be usefully extended to the psychiatric hospital as well.

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Conflict of interest

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