



The future of community psychiatry and community mental health services

Alan Rosen^{a,b,c}, Neeraj S. Gill^{d,e}, and Luis Salvador-Carulla^{f,g}

Purpose of review

The aim of this article is to provide a framework and analysis of a series of critical components to inform the future design, development, sustaining, and monitoring of community mental health services.

Recent findings

Many mental health services remain too hospital-centric, often without adequate outreach services. On the basis of outcome evidence, we need to shift the balance of mental health services from hospital-centered with community outreach when convenient for staff, to community-centered and mobile, with in-reach to hospital only when necessary. Too few training programs emphasize the macroskills of public advocacy, working with service users, families, social movements, and the media to improve mental health and wellbeing of regional and local communities.

Summary

We should adopt a health ecosystems approach to mental healthcare and training, encompassing nano to macrolevels of service in every region. Catchment mental health services should be rebuilt as community-centric mental health services, integrating all community and inpatient components, but led and integrated from community sites. Community psychiatrists and mental health professionals of the future will need to be well trained in the nano to macroskills required to take responsibility for the mental health and wellbeing of their catchment communities and to provide leadership in service-planning, management, and continuing revision on the basis of rigorous evaluation. These approaches should be the core of all training in psychiatry and all mental health professions prior to any subspecialization.

Keywords

community mental health services, digital mental healthcare, future of community psychiatry, healthcare ecosystems, psychiatric training

INTRODUCTION

Psychiatry is facing an identity crisis [1]. Factors behind this crisis include questioning of the dominance of biological foundations of psychiatric disorders, the validity, and heterogeneity of diagnoses and symptoms [2^{***}], the efficacy and safety of psychotropic drugs, and the effectiveness of psychotherapy and other interventions [3]. Deinstitutionalization has shifted to transinstitutionalization in some countries [4], and in many others, the national health systems or substantial parts thereof have been carved out and shifted to competitive markets [5]. Meanwhile, the care gaps and coverage of unmet needs (e.g., untreated prevalence) have broadened in recent years. There has been an overall failure of mental healthcare systems to provide adequate care in the context of demands for codesign and digitalization of the whole support system. Psychiatry has failed to make an impact on other sectors such as justice and social care (e.g., care for homeless

individuals and those with the disabilities). Psychiatry may also have lost its way in the face of fragmentation and unbridled privatization of catchment services, leading to concerns about ‘met un-need’ or treated nonprevalence [6].

^aIllawarra Institute of Mental Health, University of Wollongong, Wollongong, ^bBrain and Mind Centre, Sydney Medical School, University of Sydney, Sydney, ^cFar West NSW LHD Mental Health Services, Broken Hill, New South Wales, ^dSchool of Medicine, Griffith University Gold Coast, ^eMental Health and Specialist Services, Gold Coast Health, Gold Coast, ^fCentre for Mental Health Research, Research School of Population Health, ANU College of Health and Medicine, Australian National University, Canberra and ^gMenzies Centre for Health Policy, University of Sydney, Sydney, Australia

Correspondence to Neeraj S. Gill, MD, FRANZCP, School of Medicine, Griffith University, Office 8.17, G40, Hospital Boulevard, Southport, QLD 4215, Australia. Tel: +61 7 5678 0113; e-mail: neeraj.gill@griffith.edu.au

Curr Opin Psychiatry 2020, 33:375–390

DOI:10.1097/YCO.0000000000000620

KEY POINTS

- Systems thinking approach should be used for evaluation and planning of the future community mental health services, which should be reframed as complex healthcare ecosystems.
- Balance of care should quantify funding and provision tailored to the local context, between hospital and community services; health and social care; primary to tertiary care; generic to specialized care; and public, non-government and private care.
- These perspectives have significant implications for the major drivers of community mental health: person-centeredness, recovery, human rights, and challenging stigma and discrimination.
- Combined in-person and digital approaches will facilitate codesign and transform access and delivery of hybrid, person-centered integrated community mental health services.
- Skills and competence in both micro and macrocomponents of community mental health services are essential for future psychiatric training.
- Setting priorities for community mental healthcare systems must be followed by an action plan derived from a multifaceted metacommunity model.

‘Mental Health’ services may have also retreated from their implied promises to engage with whole communities to improve their wellbeing and mental health and from promoting full membership of the community as citizens for those living with severe mental disorders and disability.

Can psychiatry revive itself with a new growth of practice-innovation and evidence-informed community mental health services for all, situated in the complexities and contexts of their own lives, and on their own turf and terms? The purpose of this article is to provide a framework and analysis of critical aspects relevant to design and monitoring of community psychiatry in the future, with focus on developments since the last review of this topic in this journal in 2006 [7].

In the first section, we revise the importance of complexity and the healthcare ecosystem approach to frame these relevant issues in community psychiatry, from the ‘microsphere’ of the interaction between services users and families with health professionals to individual services and programs, to the ‘macrosphere’ of local care and national mental health systems. Then we apply this approach to provide a better understanding of current questions in mental health planning such as the balance of care, the impact of human

rights, challenging stigma and recovery, the role of digital mental health in the development of hybrid healthcare ecosystems; and then the implications of these approaches for mental health training. Finally, we discuss the policy implications and provide recommendations toward a road map and an action plan for improving community mental health globally.

COMPLEXITY AND HEALTHCARE ECOSYSTEM APPROACHES TO COMMUNITY MENTAL HEALTH

Healthcare systems and organizational interventions in mental health are complex. These complex systems are nonlinear and uncertain; they self-organize, and are context and time-dependent. Under these conditions, realistic priority-setting requires the incorporation of systems thinking, hybrid designs, new data analytics techniques, modeling tools, and decision-support systems that incorporate domain expertise [8]. This has led to restoring the valuing in contextualized science of both professional expertise and experiential knowledge of service users and families [9^a,10]. This approach should adhere to ‘evidence-informed,’ rather than ‘evidence-based, health policy, and planning. Evidence-informed planning acknowledges that policy-making is an inherently political process in which research evidence is only one of the factors that influence decision-making [11].

One of us (L.S.C.) has developed a series of decision support tools for the assessment of community mental health using the complexity and the healthcare ecosystem approaches [12^a,13,14]. These decision support systems should be applicable to specific contexts and therefore they should consider aspects that are not routinely recorded in health service research. These factors include standard and comparable descriptions of the places and communities in which we live; the wider determinants of health (e.g., the social and demographic characteristics of the environment); the health behaviors and lifestyles of the local population; and an integrated description of the healthcare provision at the different levels of the ecosystem [15].

The mental health ecosystem is a subset of the general health system which focuses on the characteristics of the population at risk or living with mental illness (incidence, prevalence, and related administrative data); the workforce and organizations providing care and support to this target population; and their connections, for example, clinician–service-user contacts, the relationships between service-users and services, and among organizations [14]. Integrated healthcare provision can

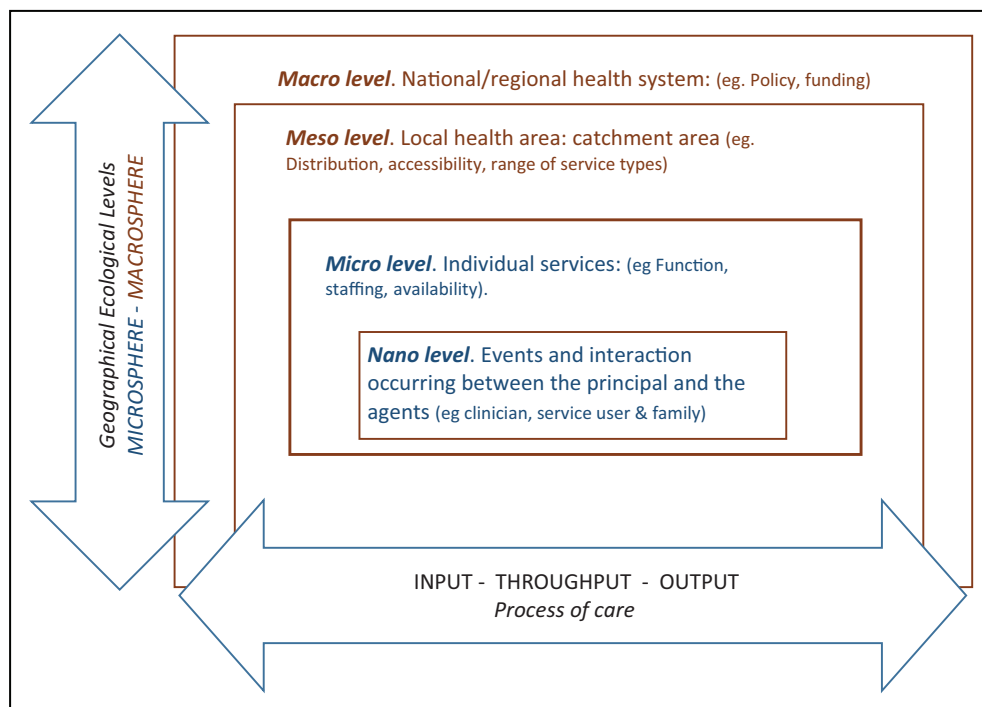


FIGURE 1. A healthcare ecosystem approach. Embedding of systems and their components, within larger systems in healthcare: geographical levels and processes of care.

be usefully differentiated at the different levels of the health ecosystem. A recent example is the analysis of mental healthcare in Belgium following an ecosystem perspective [16]. Any intervention or service-delivery system impacts at all levels of the system: from the ‘nano’ level (service user–family–professional), to the ‘micro’ level (immediate service unit or setting), ‘meso’ level (e.g., a local catchment area) and ‘macro’ (region/country). The incorporation of the ‘microsphere’ (nano and mesolevels), and the ‘macrosphere’ (meso and macrolevels) provides a conceptual connection between the healthcare ecosystem approach and the person-people-centered integrated model of care, which is critical in general community care beyond mental health [17] (Fig. 1).

Thornicroft and Tansella [18] established the foundations of the current approach to mental healthcare ecosystems by developing the Mental Healthcare Matrix model. This model found an elegant solution to a complex problem by combining the levels of the healthcare ecosystem with the three phases of the Donabedian’s process of care. This combination provided a powerful tool to frame and operationalize systems’ indicators, to better understand the role and complementarity of the instruments for service assessment, and for advancing and monitoring healthcare improvement and evidence-informed policy. Their initial model was

refined and adapted for planning in Australia [18], New Zealand, and Canada among other countries [19] (Table 1).

Examples of this approach to guide policy have been developed for regional planning in Catalonia and the Basque Country in Spain, Finland, Chile, and Australia using international classifications and

Table 1. Adaptation of the matrix model to measure mental health performance in public mental health policy and planning [18,19]

Level of the mental health system	Type of information			
	Input	Process ^a	Output ^b	Outcome
Individual practitioner				
Team				
Program				
Organization				
Region/Area				
State				
National				

^a‘Process’ has been renamed as ‘throughput’ in the adaptation of this model to mental health economics.

^bThe concept of outputs is often incorporated under ‘Processes,’ as per Donabedian’s original model. However, there is heuristic value in distinguishing the two concepts for the purpose of developing a conceptual framework of mental health service performance.

Table 2. The ‘quintuple whammy’ model of complexity of severe and enduring mental illness [70]

Defined as simultaneous ‘curses’ (as in ‘double whammies’) or a ‘full hand’ of vulnerabilities and life obstacles experienced by individuals with severe and complex mental illnesses

Psychiatric condition – severe, enduring (persistent and/or episodic)

Drug and/or alcohol dependency and other addictive behaviors

Physical disability: ongoing illness, physical neglect, reduced life expectancy

Being worn down by dire poverty and other social deprivations, for example, lack of stable and supported housing, social isolation (social determinants)

Disaffected, marginalized, alienated and/or traumatized existences:

...including-indigenous people, young people who cannot afford living costs, or who have dropped out of education and training, unemployed people, homeless or those in unstable housing, disability support pensioners, single parents, elderly on pensions, transcultural, immigrants, asylum seekers, former prisoners in transition to community living, or just being isolated from kin, etc.

questionnaires such as European Service Mapping Schedule and Description and Evaluation of Services and DirectoriEs - Long Term Care (DESDE-LTC) [20]. Integrated Atlases of Mental Healthcare using standardized tools such as DESDE-LTC for the classification of services, Geographical Information Systems, and other service assessment tools [21] have been produced in Europe [22] and in Australia and provided key context information for the spatial analysis of community services (e.g., in Western Sydney) [23] costs and financing, and to develop new smart decision support tools for care planning (e.g., Basque Country, Spain) [12*,13].

These and other studies have shown how the context of mental healthcare and care practice varies considerably not just across countries but even across regions and between neighboring health districts or different cultural communities, and this variation allows for a better understanding of socio-demographic determinants and clinical conditions. For example, the US life expectancy gap between the richest and poorest 1% of the population was estimated to exceed 14 years for men and 10 years for women with additional variations between geographical areas. A metaanalysis of 3.4 million individuals linked social isolation to a 29% increased odds of mortality with major variation across US counties. Midlife mortality and life expectancy declines (2014–2016) were worst in indigenous, black, and Hispanic populations, explained partially by poverty, income inequality, unstable employment, psychological distress (the ‘death of despair’ triad, including alcohol, substance abuse, and suicide), smoking, and divergent state policy choices, especially for vulnerable populations [24*]. Regarding environmental determinants of health, a syndrome of climate change degradation, obesity, undernutrition, overpopulation, and recent pandemics has triggered sweeping health and economic global effects. The importance of considering complexities and context, which determine mental

health problems and life-expectancy, is exemplified in Table 2.

Local context evidence may contribute to understanding why an intervention implemented successfully in one mental health system produces different outcomes in another. As has been shown by international studies of assertive community treatment [25], the effectiveness of an intervention depends on the characteristics of the local context.

HEALTHCARE ECOSYSTEMS AND BALANCED CARE: DETERMINING KEY DRIVERS OF COMMUNITY MENTAL HEALTHCARE

The balanced care model

The balanced care model was proposed as an approach to provide a whole-system perspective of the provision of mental healthcare mainly at the national level [26]. The whole idea was to optimize care provision by providing as much community care as possible and as little hospital care as possible but being aware that community care alone cannot work and that the changes should be gradual and incremental [26,27]; there will always be a need for a minimum number of beds in acute hospital care and a minimum number of beds for subacute and long-term care (wherever possible in the community as alternatives to hospital care). There has been a major effort worldwide in promoting a better balance in specialized mental healthcare, in understanding the service-provision at the national level using instruments such as the World Health Organization Assessment Instrument for Mental Health Systems (WHO-AIMS) and the WHO Atlases of mental healthcare, comparing national policies and human rights in mental health, providing information on the mental health gap and financing [28]. The WHO Comprehensive Mental Health Action Plan 2013–

2020, WHO places a major emphasis on the use of information for developing community care, and for strengthening mental health systems [29]. However, the analysis at the national level is hampered by the ecological effect in multilevel analysis (e.g., the evaluation at macrolevel overshadows key variations at mesolevel) and requires additional efforts to assess actual resource allocation at the regional and local levels to understand and monitor the balance of care.

There has been a decisive effort to consolidate community care in some South European Countries (e.g., Italy and Spain) and to improve community services in Latin American countries such as Chile (fully implemented) or Peru (early planning stages). However, psychiatry offers an unbalanced system in many countries, including advanced economies, with many perverse opportunities to fall through its gaps. Hospital-centric models are now predominant in many Anglo-speaking countries where community care is losing momentum at the same pace that a market-driven competitive system is favored by traditional public models (the United Kingdom) and private practice interests (e.g., USA, Australia). In 2015, the Australian Government rejected the recommendation made by the National Mental Health Commission to shift future growth funding priorities gradually from hospitals to community and primary mental health [30]. This governmental statement is unique in authorizing a hospital-based model as the main driver of a national system. The hospital-centric model is also predominant in France when compared with other Western European countries [31], Eastern Europe [31] and emerging economies such as India [32].

The balance of care framework could be expanded to nonhealth sectors involved in mental healthcare as suggested by the ‘meta-community’ model that considers a broader range of services such as social housing and homelessness services, prisons, asylums, schools, and refugee settings [33[¶]]. Following this holistic approach, the analysis of the ‘balance’ of care should not be restricted to hospital and community care, but it should also assess the balance between generic and specialized care and the balance between healthcare and other sectors. It is also important to note that from a health ecosystem perspective [14], the balance of care model is intrinsically a system-based approach. Therefore, it does not intend to reach a symmetry between hospital and community services or to compare evidence of one against the other. On the contrary, it aims at finding an optimal balance for improving efficiency that should be quantified both at micro and at macrospheres [12[¶]]. Figuratively speaking, we should move from a binary ‘seesaw’ representation

of the balance of care to a multidimensional model like Alexander Calder’s mobiles.

HUMAN RIGHTS, CHALLENGING STIGMA, AND RECOVERY-ORIENTATION

The new community mental healthcare should be guided by human rights, challenging stigma, and the recovery model. The United Nations Convention on the Rights of Persons with Disabilities adopts contemporary human rights framework by incorporating economic, social, and cultural rights (positive rights) as well as civil and political rights (negative rights) [34]. The positive rights can be promoted through macrolevel interventions by addressing the social determinants of health, for example, poverty, housing, education, employment, health promotion, and stigma-reduction at a community level. The negative rights can be protected through microlevel interventions of providing early access to healthcare and providing recovery-oriented least restrictive care. Thus, the macro and microlevels of community psychiatry are complementary to promoting human rights by addressing the social determinants of health; early access to social and health services; promoting recovery paradigm in mental health; respecting the inherent dignity, autonomy and freedom of every person and taking into account the choices, will and preference of the individual [35]. It is imperative that this contemporary human rights framework is adopted into the training, practice, and language of psychiatry [34].

Stigmatization of people with mental illness contributes to poor access to mental and physical healthcare; reduced life expectancy; exclusion from higher education and employment; increased risk of contact with the criminal justice system; victimization; poverty; and homelessness [36]. Together with a new categorization of stigma [37], the INDIGO Global Network has provided new research methods, a comprehensive toolkit for its assessment, and practical examples of its applicability in national and local contexts [38].

There is emerging evidence base that recovery orientation, aligned with human rights promotion and respect for human dignity and freedom of choice are therapeutic and healing. Different dimensions of recovery in mental health include ‘personal recovery,’ with central emphasis on identity, meaning and hope; ‘functional recovery’ – highlighting meaningful participation in society; and the traditional ‘clinical recovery,’ which is based on symptomatology, relapse prevention, and risk management [39,40^{¶¶}]. Mental health services require emancipation from institutional thinking and practices [41^{¶¶}]. Concern has also been

raised regarding transinstitutionalization of people with severe and persistent mental illness into prisons or forensic care facilities [4], which may be related to the underresourced community sector, lack of voluntary alternatives, and the risk-averse and punitive attitudes of the community.

Community psychiatry of the future needs to systematize voluntary alternatives, for example, peer-led community-based services, access to early intervention, joint/supported decision-making, collaborative recovery plans, advance directives, open dialogue, and open disclosure. Just having these systematized alternatives in the repertoire is not enough – they must be actually used consistently and evaluated [41¹¹]. Peer support workers must be an integral part of the mental health service planning and workforce. The future practice of psychiatry should align with a recovery model and use individualized choices and personalized narratives, particularly around service-user-led-desired outcomes. Psychiatry can then align with the recovery paradigm and human rights framework by adopting a biopsychosocial-existential model and person-centered approach. For mental health services to be truly recovery and human rights oriented, they would have to do more than paying lip-service to ‘recovery’ – it is important to systematize voluntary alternatives promoting higher order social and existential goals [2¹¹,41¹¹].

DIGITAL MENTAL HEALTH AND HYBRID SYSTEMS

Digital health facilitates cocreation, fosters agency in a people-centered healthcare system, and increases access to care. WHO [42] has made a call for healthcare providers to embrace eHealth, and computer tools have been widely implemented in community mental healthcare to improve care delivery and facilitate collaborative working. In 2020, the transition to digital mental health has experienced a rapid acceleration because of the Corona Virus Disease-19 (COVID-19) pandemic. This trend has followed different paths in different countries depending on the previous levels of implementation of apps, electronic records, and eHealth literacy [43].

‘Mixed Reality’ [44] or hybrid care [45] incorporates both real environments (in-person human interaction) with technologically facilitated human interaction (augmented reality in telemedicine), human-guided digital mental health and a brief liaison by digital services to prepare for in-person ones, whenever face-to-face care is needed. Mixed reality/hybrid care has been touted as a key advancement in healthcare, with applications in assessment, guidance and remote consultations

with service-users [44], for example, developing a system of services via the internet to reach out to vulnerable and isolated people, to communicate, culturally and socially; and clinically connecting and interacting with them [2¹¹]. In spite of the growth of scientific literature on this field, there still is a dearth of literature on the long-term efficiency, impact and implications of implementing digital tools and platforms [46]; and research into how digital tools are being used is still underdeveloped [47]. There has been a call for international evaluation frameworks to standardize designs and methods and to facilitate comparative effectiveness in digital mental health [48].

The information on usability and effectiveness should be completed with information on the local and national eHealth ecosystem and the mapping of areas of needs to locate telemedicine services [49]; and to incorporate them into the existing community mental health services. This should take into account the local characteristics of the real world and the eHealth ecosystem of the consumer’s local context (e.g., data on eHealth literacy, wifi access, cellular data limit, number of mobile phones, number of clinics with telemedicine systems, electronic medical records, open, and restricted health digital platforms). This type of information is particularly relevant in rural and remote mental health where digital mental health has been presented as an alternative to the lack of real on-site services. The Orange Declaration has stated the importance of digital health to extend service provision, as long as this is not a replacement for face-to-face help or specialist advice and care [50]. A mobile digital care pathway tool to provide recovery-focused care and facilitate coproduced care planning was recently piloted in the West of England although the evaluation was limited to its usability and practicality and it did not assess changes in the local provision or its comparative effectiveness [51].

There are also concerns on the quality and transparency of the information available to consumers. As stated in a recent Lancet editorial, ‘without a clear framework to differentiate efficacious digital products from commercial opportunism, the companies, clinicians and policy-makers will struggle to provide the required level of evidence to realize the potential of digital medicine.’ ([52], p 95). Unlike pharmaceutical research, there is little disclosure vigilance regarding financial ties and partnership bias in digital health research and it is still possible for researchers, clinicians, and health officers to be investors in the digital products that they are researching and promoting. An improvement of methods of analysis and conflict disclosure is even more pertinent in mental health, where it is

necessary to clearly define what kind of players and partners the new digital health companies will be for the mental health community, and how they will 'ensure that mental health data are secure and patient consent for their use and reuse is transparent' especially for service users who are plagued by stigma ([53], p 273).

IMPLICATIONS FOR TRAINING IN COMMUNITY PSYCHIATRY

Future community psychiatrists must have training, not only in integrated mental and physical health medicine, but also in clinical leadership and governance; community engagement; and public health and policy. In a previous article, our lead author highlighted the need for future community psychiatrists to seek specific leadership training to be an effective member of the clinical leadership group of mental health service [7]. It is unnecessary for community psychiatrists to aspire to be the sole leader of interdisciplinary service, as a small leadership group allows for strategic planning codesign, shared responsibility, and collegial support. Moreover, a significant treatment gap for mental disorders persists in many public mental health services, and especially in low and middle-income countries (LMIC), with a great scarcity of psychiatrists [54,55]. In that context, community psychiatrists may not be available to be the sole clinical leader of team or service and may need to employ 'task-shifting,' whereby psychiatrists have predominant public health roles as educators and mentors of primary healthcare workers. The latter would then assess mental disorders and deliver basic treatments and refer patients to the psychiatrist, if needed [55]. Communication technology may be used in combination with intermittent in-person input for such education, mentorship and as required, for digital and in-person health assessments [45].

The training of medical students and psychiatry trainees needs to adapt to all those challenges through greater emphasis and exposure to community mental health teams; clinical governance/leadership skills; public health policy and law; and community engagement. For community psychiatrists to meet both their micro and macrolevel commitments, they must be trained in line with the Canadian Medical Education Directions for Specialists (CanMEDS) domains as public health experts/scholars/research translators, mental health advocates, collaborative leaders, competent managers and effective communicators, in addition to being medical experts/clinicians/supervisors [56].

Community psychiatrists should be trained to look both inward and outward. They have

responsibilities for caring for the mental health and embodiment of stressors internally within both presenting individuals and issues generating psychosocial difficulties between individuals (e.g., family members), and they should also be trained and resourced to care for the mental health needs of their local catchment and communities. Therefore, the psychiatrists of the future need to familiarize themselves with the service ecosystem approach described above. Community Psychiatry training should encompass the development of proficiency, competence, and confidence by community mental health clinicians at the different levels of the ecosystem. Some tasks and skills are common to all levels such as facilitating human rights, tackling stigma and discrimination, collaborative leadership, mental health managements advocating for improvement in public health and social determinants, and social movements for promoting a recovery approach and for improving both physical and mental health. However other tasks and skills are related to the micro or to the macrosphere. Generally, only the nano to microskillset is taught and examined in depth in formal training. Little active training or supervision in the macroskills is done in most national training programs, despite lip-service or only partial applications, if at all, given to this much wider agenda of training in some leadership courses. Psychiatric training needs to expand to develop practitioner skills, confidence, and competence, working with both nano–micro and meso–macroskills. Examples of these service developments are in Table 3.

Nano to microlevel tasks and skills

These should include refinement of access, engagement, and mental health services required by individual service users and families, evidence-based technical interventions and service-delivery systems, humane relationships, and purposes fostering healing and recovery.

Community psychiatrist training in nano–microlevel skills provides sound specialized and integrated community and hospital-based mental health clinical care for individuals, families, and groups living with psychiatric disorders. Some critical requirements by mental health economists [57] for effectiveness of community mental health services at the nano–microlevels include working in teams, group supervision and supervising of supervisors ('supervision pyramids') [58], and training and supervising to international evidence-based fidelity criteria of interventions and service-delivery systems. We should 'go wider' in assessment and review, involving home-visiting

Table 3. Micro and macrospheres of community mental health: principles, models, and examples

Part 1: microsphere		
Guiding principles, models, and future directions	Components	Description/examples of growing points and innovations
Protecting and promoting human rights	Application of the UN CRPD [71] and WHO Quality Rights Modules [72]	Encouraging self-agency/autonomy, peer support and advocacy networks Systematizing and resourcing evidence-informed voluntary alternatives to involuntary/coercive mechanisms [41**]
	Social inclusion and freedom from stigma and discrimination	Moderated social contact between individuals with lived experience and local community To promote early access to social support and clinical interventions. Challenging self-stigma & personal instances of negative discrimination
Lifespan/whole systems approach to early intervention, recovery, and rehabilitation	Developmental perspective: for example, early intervention in psychosis programs and other models specific to lifespan	Diagnostic, organizational, delivery and training models; operational configurations, including type of training, staff, interventions, and delivery systems Early Psychosis Guidelines and services could be adapted to accommodate the most severe forms of high prevalence disorders and wider age groups
	Younger onset invites earlier intervention, rather than late intervention and 'maintenance stream' shelving	Most mental disorders, notably excepting dementias, have their onset in adolescence or young adulthood [73]. This shift has significant implications for theoretical diagnostic, organizational, delivery, and training models; operational configurations, including type of training, staff, interventions, and delivery systems. Most mental health services worldwide deal with people over the age of forty, which is long after the onset of the majority of disorders by that time it is more difficult to make a major improvement in their course, so individuals tend to get shelved in the low expectation 'maintenance stream' [73]. Early intervention in these disorders is much more effective in markedly improving their prospects, including symptoms, function, quality of life and recovery trajectory
	Early intervention in a spectrum of severe disorders	Encourage further development of promising to evidence-informed prevention and early intervention approaches for most psychiatric disorders across lifespan, from perinatal to old age [74,75]. Although, at present, our priority must be the most highly evidence-based systems for early intervention of psychosis in younger age groups, the protocols and services could be adapted in the future to accommodate most severe forms of higher prevalence disorders and wider age groups, as long as they do not dilute or denature the service framework for psychosis, subject to further research [73]
	Recovery and Rehabilitation as a whole systems approach	Recovery is the process led and controlled by the service users, in their own timeframe, as a journey of hope and growth throughout life, with the encouragement of people who can convey that they really believe in them Rehabilitation is the complementary component led by the professional and peer providers They maximize an individual's quality of life and social inclusion by encouraging their skill-development and promoting autonomy, and leading to successful community living through appropriate support
Positive perspectives in mental health system	Therapeutic optimism	Therapeutic optimism invokes a constructive mindset, integral to early intervention strategies in the critical period of the first five years of psychosis which can improve outcomes through systematic family, cognitive, vocational interventions; and optimizing individual, family and communal inclusion, and cultural factors associated with better prognosis while reducing stigma. It has an established evidence base, and relevant skills are readily manualized, taught, and operationalized [27]
	Positive psychiatry and psychology	Positive psychiatry and psychology are the psychiatric and psychological practices and science of promoting positive psychosocial factors to improve wellbeing and outcomes in mental and physical illnesses. It draws on research on cognitive reframing (e.g., CBT and narrative therapy), optimism, resilience, purpose and social engagement to improve emotional and social functioning [76]

Table 3 (Continued)

Part 1: microsphere		
Guiding principles, models, and future directions	Components	Description/examples of growing points and innovations
	Woodshedding	Woodshedding is a phase in the slow recovery of psychosis, in which there are long periods of no apparent improvement, whereby the individual is subtly and incrementally gaining self-esteem, competence, stamina, and social skills. After an acute episode, the individual may improve initially but then seems to stop getting better for a long period, often resulting in 'maintenance stream' placement. Given a therapeutic environment of patient and constant encouragement, this may be followed by a discontinuous leap into a higher level of function [27]
Facilitating evidence-informed intervention and service-delivery systems	Further Development of Evidence Based Components and Fidelity Criteria, on evidence-based interventions and service-delivery systems	Active-response, mobile home-visiting community mental health Crisis Teams and Assertive community treatment teams [25,77] Community residential respite facilities [78] Early intervention in psychosis teams Assess and monitor fidelity of the interventions [77] Housing initiatives [79] Employment programs, individual placement and support [80] Cultural adaptation of interventions
	Active-response, mobile, home-visiting community mental health teams	Implement active-response, mobile, home visiting community mental health teams, supervising to the evidence-based fidelity criteria for home visiting in operational manuals for mental health crisis teams, early intervention in psychosis teams & assertive community treatment and support teams [25,81]
	Multiple family groups	Facilitated series of meetings with median to large groups comprising several individuals living with severe and enduring mental illness (and more recently first-episode psychosis and prodromal states) with their families, to work together on education about managing life with these disorders, more effective low-key communication styles, and brainstorming/problem-solving techniques. Derived from studies by Ian Falloon and Grainne Fadden, it has high-level RCT outcome evidence and has been adapted to mood and eating disorders [82]
	Significant interventions without adequate evidence – Possible growing points	Supervision and Pastoral mentorship for all mental health providers Individual and/or group in house line-supervision or regular external consultation for all mental health professional and support providers, including peers Individual mentorship of all mental health providers at every level in the service, for example, to deal with work/home life balance, vicarious trauma, organizational pressures, and career progression
		Open Dialogue in Acute Psychosis episode, combining crisis intervention at home, family intervention, extending the local support system, working dialogically, honoring polyphony of different voices and viewpoints [83]. The evidence base for this is deficient despite many years of development and continuing studies.
	Primary healthcare integrating with community mental health services	Youth Enhanced Support Service (YESS) Teams and adult mobile equivalents for the 'missing middle' (often unserved) clientele, working directly in liaison with Primary Healthcare (GP) practices and Primary Health Networks (Northern and Western Sydney) IAPT: in primary healthcare: systematized evidence-based psychological therapies augmenting general practices with co-located teams of graduate psychologists supervised strictly to fidelity criteria (United Kingdom), though its reach to most needy populations is limited. However, the uptake penetration with most vulnerable and needy individuals of IAPT is still too limited An alternative to IAPT has been developed in New Zealand in conjunction with Primary Health Organizations and GP practices, providing a broader menu and choice of therapeutic roles: a counselor/behavioral health consultant, a peer/cultural Health Coach, NGO provided peer and community support

Part 2: macrosphere		
Guiding principles, models, and future directions	Components	Description/examples of growing points and innovations
Workforce and training for mental-health services and related professions	Continual learning organization	Ensuring that mental health service is a continual learning organization, including how to build and sustain an interdisciplinary team, and how to widen the core of common ground and common practices that we should share as teams [84]
	Communities of Practice	Regular opportunities to network with similar teams on a regional, cross-national, and international basis to swap notes regarding interpretation of guidelines, applying best practices and solutions [85]
Social and environmental challenges	Mental health service response to manmade and natural disasters/hazards	For example, COVID-19 pandemic; 2019 extreme wildfires Restriction of the means of harm for suicide and homicide A balance needs to be achieved between office-based telehealth and in-person mobile home-visiting services by familiar clinical and support providers. Otherwise, hospital emergency and inpatient facilities will be overwhelmed when delayed surges of acute episodes occur
Protecting and promoting human rights	Application of the UN CRPD and WHO Quality Rights Modules	Provide guidance using comparisons across regions and countries Legislative amendments to minimize coercive practices and systemic discrimination
	Social inclusion and freedom from stigma and discrimination	Social movement approach to dispel stigma and eliminate discrimination Public advocacy to challenge widespread stigma and negative structural discrimination Public awareness media campaigns should be preceded by grassroots network meetings between local communities, services users and their families Social enterprises and intersectoral collaborations to ensure participation of people with lived experience in the workforce
	Rights to Address equity and the social determinants of health	Advocating for public policy and whole of government approach to reduce poverty, provide housing, employment, education, social inclusion and access to healthcare
Lifespan/whole systems approach to recovery and rehabilitation	Recovery and rehabilitation systems	Eliminating poverty, as a precursor to mental illness
		Technical agricultural innovations with local manufacture and employment for pastoral applications on the basis of microloans to promote relief from poverty and positive rights to prevent and ameliorate mental illnesses (Paul Polak, International Development Enterprises)
Facilitating evidence-informed early intervention and service-delivery systems	Recovery and rehabilitation systems	Rehabilitation driven by recovery entails the various components of the mental health system working collaboratively to support recovery. This 'whole system' includes inpatient and community-based components provided by statutory health and social care services, nongovernmental organizations and independent providers of health, housing, welfare benefits, education, and employment services
	Population-based adaptations	Specific culturally appropriate adaptations and proxies for all these levels of service for rural remote, indigenous, transcultural, refugee/asylum-seeker, LGBTI, forensic and cooccurring mental health, and substance-using populations and communities
Workforce and training for mental health services and related professions	Primary healthcare integrating with community mental health services	Specific access to psychotherapy programs such as IAPT are being nationally implemented in several countries around the world, e.g., United Kingdom, New Zealand, Canada, France, and Chile [57].
	Applying nationally consistent training, supervision, and qualifications Recovery colleges	National institutes for mental health service workforce training, supervision, and mentorship for interdisciplinary teams including peer workers Recovery colleges offer a comprehensive range of courses based on the wishes and needs of people with living experience of mental illness and of clinical services. They embody a shift from a focus on therapy to education and from a clinical illness to a wellbeing approach. Some of them are registered training providers, training peer facilitators for the mental health workforce [86]

Table 3 (Continued)

Part 2: macrosphere		
Guiding principles, models, and future directions	Components	Description/examples of growing points and innovations
Intentional communities	Multiple family groups	Families involved often form ongoing intentional communities for continuing these methods, reciprocal support and friendship when professionally facilitated sessions end
	Social enterprises or social cooperatives	To develop work opportunities and businesses with a triple bottom line, of providing real jobs for real pay for people living with disabilities, profitability to support workforce and a social or ecological purpose. Prominent in Europe where these businesses get a substantial tax break if more than 30% of workers have a disability
	Urban renewal	Microareas as intentional communities: community building of social inclusive networks, common spaces and activities (Trieste, Italy)
	Living skills centers	For example, men's sheds, female craft collectives and service user drop in centers as 'communities of identity'
	A social movement approach	To promote early access to evidence-informed interventions, for example, social movements of GPs, families, and mental health professionals for early intervention and physical healthcare [59,87] and employment in first episodes in psychosis
Social and environmental challenges	Climate change and disaster response psychiatry	Taking responsibility to deal with psychosocial impacts of droughts, extreme bushfires, floods and possibly pandemics as harbingers of climate change, via emergence of climate change psychiatry, dealing with anticipatory and actual grief and trauma, and advocating for marginalized communities which are the most vulnerable (e.g., indigenous, the poor, the homeless, physically and developmentally disabled, forensic, drug and alcohol affected and severely mentally ill populations)
	Advocacy, for example, gun control	Issues which impinge on the lives of people living with mental illnesses, e.g., gun control to deter mass shootings (service users are much more likely to be victims than perpetrators) and challenging structural discrimination against mentally ill service users by government agencies
	Urban renewal and design	Codesign of Urban Renewal of Tenement Precincts in Decay according to Basaglian community mental health principles in Trieste, Italy, e.g., social inclusivity, generational reciprocity (e.g., young assisting elderly), involving architecture faculties consulting precinct community to redesign their urban housing precincts, and partnerships with local social and health services to meet unique mix of needs

CBT, Cognitive behaviour therapy; CRPD, Convention on the Rights of Persons with Disabilities; GPs, General practitioners; IAPT, Improving Access to Psychological Therapies; LGBTI, Lesbian gay bisexual transgender and intersex. Adapted from Refs. [35,81].

and family involvement wherever possible, to include all contextual concerns from a holistic perspective that encompasses all aspects: biopsychosocial, cultural, spiritual and ecological, and also widening the interdisciplinary team to include more health disciplines. These are now contributing to better health outcomes for people living with mental illnesses and improving their life expectancies (e.g., dieticians, exercise physiologists, drug and alcohol workers, community pharmacists, vocational specialists, peer workers, and general practitioners) [59].

Meso to macrolevel tasks and skills

These tasks should include culturally universal collective tasks of buffering communal and climatic hurts and trauma, drawing on the person's extended

kinship system, relational communities, social movements, and enabling people to complete their rites of passage to grow and develop purposeful lives within their communities.

The key skills in training programs should teach and provide supervised experience in acquiring and consolidating macroskills of public advocacy, extended kinship systems and multiple family groups, service user and family groups, social movements and the media, facilitating human rights or challenging stigma and discrimination, to improve the mental health and wellbeing of their local or regional catchment communities. These competencies enable practitioners to develop buoyancy and sense of competence and confidence, in community meetings, stakeholder groups, and social movements, dealing with communal stressors, traumas, stigma and discrimination, human rights issues,

access and service equity and parity for your whole local catchment, state, or national population.

A ROADMAP TO COMMUNITY MENTAL HEALTHCARE OF THE FUTURE

The 2017 report of the Lancet Psychiatry Commission on the Future of Psychiatry has contributed significantly to prioritize key aspects of mental healthcare design for the future [60¹]. It underscores key areas for health improvement, such as a focus on healthcare systems, human rights and regulations, digital mental health, and the training of psychiatrists. However, to transfer priorities into actionable local implementation, the Lancet report should be followed by a series of practical steps. First, a terminological consensus and a formal integrated taxonomy of the models and components of community care is needed, just as a common taxonomy of mental disorders was needed in the 1970s. This would minimize the ambiguity and vagueness [61] that may lead to confusion and misinterpretation, which in turn, could lead to national and local initiatives detrimental for the future of community psychiatry. For example, the statement made by the Lancet Commission about the balance of care model could be interpreted as the existence of separate models of hospital and community care. Community mental health models have integrated hospital and community services since their inception. Without an accompanying formal definition and taxonomy, the Lancet Commission statement on ‘balance of care’ can be misinterpreted, as if hospital and community care were two opposing movements, which is not the intention of the balanced care model. The statement could also be misinterpreted as implying a symmetry or equivalence of evidence between hospital and community components of the system. Although we will continue to need the inpatient component for a significant minority, there is no rigorous evidence that supports a hospital care model versus community-based alternatives [63]. The Lancet report also supports the stepped care model without defining it. This vagueness may lead to different interpretations and ultimately accentuate the fragmentation and discontinuity of care when stepped care is adopted as a driver for systems’ planning. As an example, although stepped care was used in Europe to design interventions within existing services (e.g., primary care psychotherapy) [2¹], its adoption as the guiding principle of the mental health system in Australia implies the development of separate services for every stage of severity [62].

The Lancet Commission’s report could be usefully complemented by considering the evidence-

based interventions informing delivery systems for complex and severe mental illness such as Assertive Community Treatment, Mental Health Crisis Intervention, and supported accommodation and respite care [63]. The pivotal role of community psychiatry for both training and consistent service delivery in both micro and macrospheres of community psychiatry should go beyond the recommendations of the Lancet report. Recently, van Os *et al.* [2¹] questioned the validity of a diagnosis-based symptom reduction approach, one of the core elements for mental healthcare design and planning, and proposed a patient-centered, transsyndromal framework. Concurring with the evidence-informed approach [64], van Os states that the so-called evidence-based practice’ does not take into account the service-level contextual factors and patient-clinician level relational factors. Therefore, van Os proposes a reorganization of psychiatry training and service-delivery to promote therapeutic relationship building skills and a patient-centered approach based on values of existential recovery, for example, connectedness, empowerment, identity, meaning, and hope. He also emphasized the community psychiatry services need to be based in an enhanced primary care model, with integrated specialist psychiatric, drug and alcohol, and social sector input. This must be complemented by an expanded public mental health system including e-communities providing information, self-help, and peer support [2¹].

The European Community Mental Health Service Provider (EUCOMS) Network [40¹], bases its approach to a holistic model of community-based mental healthcare on the practical experiences of service provision in Europe and consensus across provider and peer organizations. According to their model, high-quality services should encompass: the protection of human rights, a public health approach, the promotion of the recovery journey of service users, the evaluation of effectiveness (i.e., use of effective interventions based on service user goals as well as evidence) the development of a wide network of community support and services, and the incorporation of service user/peer expertise in service planning and delivery [40¹]. EUCOMS recognizes the difficulty of balancing the principles of recovery and effectiveness but acknowledges that both should be considered to achieve a person-centered approach that takes into account the different levels of care: self-help, resource group, the generic community services, and the community mental health.

The principles and priorities for future mental healthcare laid out by these and other recent approaches should be followed by a roadmap and

action plan to get us there. Although this discussion article has focused on the generic aspects of the adult community mental healthcare, an action plan should necessarily include a whole span of services that we have not reviewed in detail such as promotion services, care for child services, transition to adulthood, psychogeriatrics, comorbid physical illness, neurodevelopmental disorders or drug, and alcohol problems. These areas also need to be managed providing integrated care rather than silo'ed treatment. Similarly, a special consideration should be made to design, planning and monitoring of community mental health services in low and middle-income countries that incorporate an

operationalization of the basic services types for LMIC listed in the original balance of care model [26] in the context of the global development goals [65].

CONCLUSION AND RECOMMENDATIONS

All public mental health services should be rebuilt as community-centric mental health services, integrating all regional or local community-based and hospital (including inpatient) components, and led from community sites. This can be achieved through contextually and complexity-informed community-based care for individuals, with their

Table 4. Recommendations for the future of community psychiatry and community mental health services

Every regional mental health authority should consult widely with all sectors, public, private, and NGO to codesign and work together to a single/unitary mental health plan
It should have the authority to commission evidence-informed services at arm's length on the basis of being enabled to pool funds from different sources and have statutory mechanisms to ensure that ostensibly dedicated mental health resources will not be sidetracked for other nonmental health purposes
Correspondingly, all mental health professionals should be well trained in all aspects of nano to macro-mental health knowledge and practical skills, as the core or stem disciplines, from which they may then branch out to subspecialties as required, while retaining a critical mass of community-based psychiatrists and mental health professionals who in-reach to hospitals as necessary
Internationally and nationally consistent standardization should be established regarding workforce training, and line supervision to evidence-based criteria, pastoral mentorship, and widely recognized qualifications
National Mental Health Service standards and indicators should be reconstructed as policy drivers, for service providers to align with policy implementation guides and evidence-based fidelity criteria, and to provide a common language guide for service users, their families and the public, as to what they should be able to expect from standardized regional services. For example, Australia's National Standards for Mental Health Services [88]; The European Observatory on Health Systems and Policies, an intergovernmental partnership, hosted by the WHO which specializes in the development of such health systems within Europe
To engage adolescents and young adults early in the course of life-disrupting disorders, mental health services must become much more accessible, youth-friendly, and focused on age-appropriate psychosocial issues and developmental priorities [73]. To achieve this, there should be specific training for psychiatrists, other mental health professionals and peer support workers
We should build on the existing, substantial, and still developing, evidence base for community mental health services components, to complement the Lancet Commission report on the future of psychiatry [60], e.g., assertive community teams, mental health crisis community respite facilities and early intervention in psychosis teams. Moreover, we need to develop promising growing points in services: e.g., human rights facilitation, recovery approach, and challenging stigma and discrimination; adding peer workers and on-line interventions as integral to interdisciplinary teamwork, not as replacements for in-person mental health professional roles and interventions. We need all of them working together
Formal, rigorous training and supervision in the meso to macroskills, complementing current training in nano to microskills, should be implemented widely in all national training programs for all psychiatry trainees. Such training should be active, experiential and academic, including skills to enable mental health professionals to be cooperative team players in interdisciplinary leadership groups
Mental healthcare ecosystems analysis requires advanced quantitative techniques for estimating the local quanta of services, facilities, and professionals across hospital and community care; identifying benchmarking, allocative and comparative efficiency of different services in different catchment areas; and the evolution of community care in local and regional areas over time [64,89]. We need consensus guidelines that could inform the quality of research in this area and facilitate grading of evidence and standardized recommendations
We should adopt a health ecosystems approach to mental healthcare and training, encompassing nano to macrolevels of service in every region. All catchment mental health services should be rebuilt as community-centric mental health services, integrating all community and inpatient components, but led and integrated from community sites
We need consistent policy and a legislative framework for the future development and stability and protection of resourcing for community psychiatry and community mental health with a roadmap and an action plan to get us there
Community services should be digitally augmented but retaining and developing further the capacity for in-person engagement and intensive home visiting when required. If transient residential placement is needed, we should be able to provide an unlocked voluntary home-like respite facility.
Established and emerging evidence suggests that psychiatry of the future should entail shifting the centre of gravity of services from hospital-centric services with occasional outreach, to community-centered services and facilities, with in-reach to hospital when needed, on a safety or urgent organic assessment based.

families and caregivers, wherever possible ‘on their own turf and terms’. However, to move from principles and priorities to action planning, we should adopt an ecosystems approach encompassing the nano, micro, meso, and macrolevels of mental healthcare following a holistic (bio-psycho-social, cultural, ecological, person-centered, and integrated) model [66,67]. At a nano (individual and family) and micro (mental health service) level, evidence-based interventions and service-delivery methods need to be applied and systematized (e.g., assertive community treatment; early intervention in psychosis and other disorders; psychiatric crisis management; and residential respite care) [25]. Consensus guidelines could inform the quality of research in this area and facilitate grading of evidence and standard recommendations (Table 4).

During the last few years, major progress has been made in the development of technical supports and instruments to improve community mental health. However, we still lack a comprehensive approach to the analysis of the interaction between humans and technology. The new path to hybrid service delivery should not be limited to eHealth, as it should include active-response home-visiting services; more equitable access to clinicians and peer support workers; augmenting in-person services with digitally mediated individual and group contact; employment, social housing, upholding social inclusion and human rights, and challenging stigma and discrimination.

Psychiatry is a discipline which has contributed the multifaceted biopsychosocial and cultural-ecological outlook to the other disciplines of medicine [66]. Eisenberg [68] went one step further and claimed psychiatry to be a paradigm for the rest of the medical practice of the future. He argued that in doing so, psychiatry should undertake organizational and political tasks to ally itself with other professions to promote the health of the public [68]. We go back to Eisenberg’s restated core role of psychiatry in the redesign of the healthcare system, to integrate both clinical and psychosociocultural concerns [68]. In this respect, the current crisis of psychiatry resonates in the crisis of the healthcare system as a whole [69] and the solutions that we could elucidate will have an impact on the overall health system as well.

Acknowledgements

Our thinking on these issues has been greatly influenced by Professors Leon Eisenberg, Len Stein, Michele Tansella, Paula Goering, Doctors Richard Warner, Paul Polak and Denis Scott and Ms Anne Deveson (all deceased), Professors Helen Killaspy, Helen Herrman, Pat Dudgeon, and Doctors Roberto Mezzina, Ken

Thompson, Michelle Funk, Pat Bracken, and Rafael Bengoa. We also acknowledge Ms. Vivienne Miller and Mr Zacha Rosen for their support with editing the article.

Financial support and sponsorship

None.

Conflicts of interest

There are no conflicts of interest.

REFERENCES AND RECOMMENDED READING

Papers of particular interest, published within the annual period of review, have been highlighted as:

- of special interest
- of outstanding interest

1. Malhi GS. The truth, the whole truth and nothing but the truth. *Austr N Zeal J Psychiatry* 2019; 53:6–7.
2. van Os J, Guloksuz S, Vijn TW, *et al.* The evidence-based group-level symptom-reduction model as the organizing principle for mental healthcare: time for change? *World Psychiatry* 2019; 18:88–96.
3. Sakaluk JK, Williams AJ, Kilshaw RE, Rhyner KT. Evaluating the evidential value of empirically supported psychological treatments (ESTs): a meta-scientific review. *J Abnorm Psychol* 2019; 128:500.
4. Marquant T, Torres-Gonzalez F. Deinstitutionalization versus transinstitutionalization. In: Goethals K, editor. *Forensic psychiatry and psychology in Europe*. Cham: Springer; 2018. pp. 293–304.
5. Beaulieu ND, Dafny LS, Landon BE, *et al.* Changes in quality of care after hospital mergers and acquisitions. *N Engl J Med* 2020; 382:51–59.
6. Bobevski I, Rosen A, Meadows G. Mental health service use and need for care of Australians without diagnoses of mental disorders: findings from a large epidemiological survey. *Epidemiol Psychiatr Sci* 2017; 26:596–606.
7. Rosen A. The community psychiatrist of the future. *Curr Opin Psychiatry* 2006; 19:380–388.
8. Gibert K, Garcia-Alonso C, Salvador-Carulla L. Integrating clinicians, knowledge and data: expert-based cooperative analysis in healthcare decision support. *Health Res Policy Syst* 2010; 8:28.
9. Salvador-Carulla L, Lukersmith S, Sullivan W. From the EBM pyramid to the Greek temple: a new conceptual approach to guidelines as implementation tools in mental health. *Epidemiol Psychiatr Sci* 2017; 26:105–114.

This paper provides a conceptual review of the scientific knowledge required to approach community mental health questions from a complexity and systems thinking approach. It advocates to replace the unidimensional EBM Cochrane pyramid of evidence by a “Greek Temple” made by five columns or domains of scientific knowledge required for complexity analysis: experimental, observational, contextual, expert and experiential. It also provides a practical example of its application to the development of clinical practice guidelines in mental health care.

10. Rosen A. What does co-design, co-production & co-delivery mean to me? In: Co-design: shared perspectives in authentic co-design: the co-design initiative. Melbourne: Civil Society; 2016.
11. World Health Organization. *European health report 2018: more than numbers – evidence for all*. WHO Regional Office for Europe; 2018.
12. Garcia-Alonso CR, Almeda N, Salinas-Pérez JA, *et al.* A decision support system for assessing management interventions in a mental health ecosystem: the case of Bizkaia (Basque Country, Spain). *PLoS One* 2019; 14:e0212179.

This article coauthored by a multidisciplinary team of health systems engineers, health geographers, health planners, and health service researchers illustrates the use of the healthcare ecosystem approach to implement decision support tools for regional planning. It analyzes the relative technical efficiency of the whole care provision for mental health in the catchment areas of the community mental health centers of Bizkaia, Basque Country, Spain.

13. Chung Y, Salvador-Carulla L, Salinas-Pérez JA, *et al.* Use of the self-organising map network (SOMNet) as a decision support system for regional mental health planning. *Health Res Policy Syst* 2018; 16:35.
14. Furst MA, Bagheri N, Salvador-Carulla L. An ecosystems approach to mental health services research. *BJPsych Int* 2020. (in press) Accepted March 27, 2020. DOI:10.1192/bji.2020.24.

15. The King's Fund. A vision for population health: towards a healthier future; 2018. Available from: <https://www.kingsfund.org.uk/publications/vision-population-health>.
16. Sels C, Van Hootegem G. Designing networks for integrated care within the Belgian mental healthcare ecosystem. In: Mohr B, Dessers E, editors. Designing integrated care ecosystems. Cham: Springer; 2019. pp. 173–187.
17. Charles A, Ham C, Baird B, *et al.* Reimagining community services: making the most of our assets. King's Fund: London; 2018.
18. Thornicroft G, Tansella M. The mental health matrix: a manual to improve services. Cambridge: Cambridge University Press; 2006.
19. McEwan KL, Goldner EM. Accountability and performance indicators for mental health services and supports: a resource kit. Ottawa: Health Canada; 2001.
20. Romero-López-Alberca C, Gutiérrez-Colosía MR, Salinas-Pérez JA, *et al.* Standardised description of health and social care: a systematic review of use of the ESMS/DESDE (European Service Mapping Schedule/Description and Evaluation of Services and DirectoriEs). *Eur Psychiatry* 2019; 61:97–110.
21. Salvador-Carulla L, Amaddeo F, Gutiérrez-Colosía MR, *et al.* Developing a tool for mapping adult mental healthcare provision in Europe: the REMAST research protocol and its contribution to better integrated care. *Int J Integr Care* 2015; 15:e042eCollection, PubMed PMID: 27118959; PubMed Central PMCID: PMC4843179.
22. Alonso-Trujillo F, Salinas-Pérez J, Gutiérrez-Colosía M, *et al.* Impact assessment of a multisectoral plan for the promotion of health and social wellbeing in Andalusia. Spain: *Gaceta sanitaria*; 2019.
23. Maas C, Salinas-Pérez JA, Bagheri N, *et al.* A spatial analysis of referrals to a primary mental health programme in Western Sydney from 2012 to 2015. *Geospat Health* 2019; 14:. doi: 10.4081/gh.2019.773.
24. Koh HK, Parekh AK, Park JJ. Confronting the rise and fall of US life expectancy. *JAMA* 2019; 322:1963–1965.
This article provides a good example of the combined use of geographical information system and the analysis of determinants of health and administrative data to identify a novel construct in mental health ('deaths of despair') which is highly relevant for policy and planning at the different levels of the mental health ecosystem, from the nano to the macrolevels.
25. Rosen A, Killaspy H, Harvey C. Specialisation and marginalisation: how the assertive community treatment debate affects individuals with complex mental health needs. *Psychiatrist* 2013; 37:345–348.
26. Thornicroft G, Tansella M. The balanced care model: the case for both hospital- and community-based mental healthcare. *Br J Psychiatry* 2013; 202:246–248.
27. Shiers D, Rosen A, Shiers A. Beyond early intervention: can we adopt alternative narratives like 'Woodshedding' as pathways to recovery in schizophrenia? *Early Interv Psychiatry* 2009; 3:163–171.
28. Maulik P, Daniels A, McBain R, Morris J. Global mental health resources. In: Patel V, Minas H, Cohen A, Prince MJ, editors. *Global mental health: principles and practice*. New York: Oxford University Press; 2013. pp. 167–192.
29. Lora A, Hanna F, Chisholm D. Mental health service availability and delivery at the global level: an analysis by countries' income level from WHO's Mental Health Atlas 2014. *Epidemiol Psychiatr Sci* 2017; 1–12; doi: 10.1017/S2045796017000075. [Epub ahead of print]
30. Australian Government. Australian Government response to contributing lives, thriving communities – review of mental health programmes and services. Canberra: Department of Health; 2015; 8.
31. Gutiérrez-Colosía MR, Salvador-Carulla L, Salinas-Pérez J, *et al.* Standard comparison of local mental healthcare systems in eight European countries. *Epidemiol Psychiatr Sci* 2019; 28:210–223.
32. Murthy P, Isaac M. Five-year plans and once-in-a-decade interventions: need to move from filling gaps to bridging chasms in mental healthcare in India. *Indian J Psychiatry* 2016; 58:253–258.
33. Bouras N, Ikkos G, Craig T. From community to meta-community mental healthcare. *Int J Environ Res Public Health* 2018; 15:806.
This paper suggests an extension of the community care model. A pluralistic and multisectoral approach is suggested based on the following main aims: role of primary care, user participation and efforts to reduce stigma, physical aspects of mental illness, patient-centred approach, care delivery in a broad span of settings including schools, workplace, prisons and asylums, and adopting the principles of sustainability, flexibility and innovation
34. Gill NS. Human rights framework: an ethical imperative for psychiatry. *Austr N Zeal J Psychiatry* 2019; 53:8–10.
35. Gill NS. Human rights of people with mental disabilities: a thesis in fulfilment of the requirements for the degree of Doctor of Public Health. Sydney: University of New South Wales; 2020.
36. Thornicroft G, Bakolis I, Evans-Lacko S, *et al.* Key lessons learned from the indigo global network on mental health related stigma and discrimination. *World Psychiatry* 2019; 18:229–230.
37. Tomar N, Thornicroft G. Principle of gradient rationality: revisiting stigma and conceptualizing its guiding mechanism. *Soc Sci Med* 2020; 245:112716.
38. Maulik PK, Devarapalli S, Kallakuri S, *et al.* Longitudinal assessment of an antistigma campaign related to common mental disorders in rural India. *Br J Psychiatry* 2019; 214:90–95.
39. Slade M. Mental illness and wellbeing: the central importance of positive psychology and recovery approaches. *BMC Health Serv Res* 2010; 10:26https://doi.org/10.1186/1472-6963-10-26.
40. Keet R, de Vetten-Mc Mahon M, Shields-Zeeman L, *et al.* Recovery for all in the community: position paper on principles and key elements of community-based mental healthcare. *BMC Psychiatry* 2019; 19:174.
This position article provides a holistic model of community mental healthcare based on an international bottom-up and experience-base consensus. It is based on six main components including peer support and recovery combined with evidence-based approaches.
41. Mezzina R, Rosen A, Amering M, Javed A. The practice of freedom: human rights and the global mental health agenda. In: *Advances in Psychiatry*. Hiedelberg - New York: Springer; 2019; 483–515.
This book chapter highlights that freedom and human rights are inherently therapeutic and emphasizes that the need to systematize and resource voluntary alternatives to involuntary treatment practices.
42. World Health Organisation. Draft global strategy on digital health 2020–2024. Draft March 2020. Geneva: World Health Organisation. Available from: https://www.who.int/docs/default-source/documents/g4hdad2a9f352b0445bafbc79ca799dce4d.pdf?sfvrsn=f112ede5_38 [Accessed 06 May 2020]
43. Alvarez-Galvez J, Salinas-Pérez JA, Montagni I, Salvador-Carulla L. The persistence of digital divides in the use of health information: a comparative study in 28 European countries. *Int J Public Health* 2020; 65:325–333.
44. Hu HZ, Feng XB, Shao ZW, *et al.* Application and prospect of mixed reality technology in medical field. *Curr Med Sci* 2019; 39:1–6.
45. Yellowlees P, Shafiqat S, Myers K. Indirect consultation and hybrid care. In: Yellowlees P, Shore JH, editors. *Telepsychiatry and health technologies: a guide for mental health professionals*. Arlington, VA: American Psychiatric Publication; 2018. pp. 251–288.
46. Gardner J, Cribb A. The dispositions of things: the nonhuman dimension of power and ethics in patient-centred medicine. *Social Health Illness* 2016; 38:1043–1057.
47. Trnka SH. Digital care: agency and temporality in young people's use of health apps. *Engag Sci, Technol, Soc* 2016; 2:248–265.
48. Torous J, Andersson G, Bertagnoli A, *et al.* Towards a consensus around standards for smartphone apps and digital mental health. *World Psychiatry* 2019; 18:97.
49. Soares N, Dewalle J, Marsh B. Utilizing patient geographic information system data to plan telemedicine service locations. *J Am Med Inform Assoc* 2017; 24:891–896.
50. Perkins D, Farmer J, Salvador-Carulla L, *et al.* The Orange Declaration on rural and remote mental health. *Austr J Rural Health* 2019; 27:374–379.
51. Pithara C, Farr M, Sullivan SA, *et al.* Implementing a digital tool to support shared care planning in community-based mental health services: qualitative evaluation. *J Med Internet Res* 2020; 22:e14868.
52. The Lancet. Is digital medicine different? *Lancet (London, England)* 2018; 392:95.
53. *Lancet Psychiatry*. Digital health: the good, the bad, and the abandoned. *Lancet Psychiatry* 2019; 6:273.
54. World Health Organization. (2008) mhGAP: Mental Health Gap Action Programme: scaling up care for mental, neurological and substance use disorders. Geneva: World Health Organization. <https://apps.who.int/iris/handle/10665/43809>
55. Patel V. The future of psychiatry in low-and middle-income countries. *Psychol Med* 2009; 39:1759–1762.
56. Frank JR, Danoff D. The CanMEDS initiative: implementing an outcomes-based framework of physician competencies. *Med Teach* 2007; 29:642–647.
57. Layard R, Clark DM. Thrive: the power of evidence-based psychological therapies. UK: Penguin; 2014.
58. Atif N, Nisar A, Bibi A, *et al.* Scaling-up psychological interventions in resource-poor settings: training and supervising peer volunteers to deliver the 'Thinking Healthy Programme' for perinatal depression in rural Pakistan. *Global Mental Health* 2019; 6:e4, 1-10.
59. Curtis J, Newall HD, Samaras K. The heart of the matter: cardiometabolic care in youth with psychosis. *Early Interv Psychiatry* 2012; 6:347–353.
60. Bhugra D, Tasman A, Pathare S, *et al.* The WPA–Lancet psychiatry commission on the future of psychiatry. *Lancet Psychiatry* 2017; 4:775–818.
This article has contributed significantly to prioritise key aspects of mental health care design for the future. However, to transfer priorities into actionable local implementation, the Lancet report should be followed by a series of practical steps.
61. Montagni I, Salvador-Carulla L, Mcdaid D, *et al.* The REFINEMENT glossary of terms: an international terminology for mental health systems assessment. *Admin Policy Mental Health Mental Health Serv Res* 2018; 45:342–351.
62. Rosenberg S, Salvador-Carulla L, Hickie I, Mendoza J. Stepped mental healthcare model leading Australia astray. *Australas Psychiatry* 2020; Accepted for publication on 18 April 2020.
63. Rosen A, Mezzina R, Shiers D. Correspondence: the future of psychiatry commission. *Lancet Psychiatry* 2018; 5:16–17.
64. Furst MA, Gandré C, López-Alberca CR, Salvador-Carulla L. Healthcare ecosystems research in mental health: a scoping review of methods to describe the context of local care delivery. *BMC Health Serv Res* 2019; 19:173.

65. Chandra PS, Chand P. Towards a new era for mental health. *Lancet* 2018; 392:1495–1497.
66. Rosen A, Rosen T, McGorry P. The human rights of people with severe and persistent mental illness: can conflicts between dominant and nondominant paradigms be reconciled? In: Dudley M, Silove D, Gale F, editors. *Mental health and human rights: vision, praxis, and courage*, 1st ed. Oxford: Oxford University Press; 2012. pp. 297–320.
67. Mezzich JE, Salloum IM, Cloninger CR, *et al.* Person-centred integrative diagnosis: conceptual bases and structural model. *Can J Psychiatry* 2010; 55:701–708.
68. Eisenberg L, Guttmacher LB. Were we all asleep at the switch? A personal reminiscence of psychiatry from 1940 to 2010. *Acta Psychiatr Scand* 2010; 122:89–102.
69. Djulbegovic B, Elqayam S, Dale W. Rational decision making in medicine: implications for overuse and underuse. *J Eval Clin Pract* 2018; 24:655–665.
70. Rosen A. The 'Quintuple Whammy' model of complexity of severe & enduring mental illness. Sydney, Australia: New South Wales State Parliamentary Forum, Catholic Social Services; 2014.
71. United Nations. Convention on the rights of persons with disabilities, adopted on 13 December 2006, GA Res 61/106, UN Doc A/Res/61/106 (entered into force 3 May 2008). New York; 2006. Available from: <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>. Accessed 06 May 2020.
72. World Health Organization. WHO quality rights initiative – improving quality, promoting human rights. Geneva: World Health Organization; 2019. Available from: https://www.who.int/mental_health/policy/quality_rights/en/. Accessed 06 May 2020.
73. De Girolamo G, McGorry PD, Sartorius N. Age of onset of mental disorders: etiopathogenetic and treatment implications. Cham: Springer; 2018.
74. Byrne P, Rosen A. Early intervention in psychiatry: El of nearly everything for better mental health. Oxford: John Wiley and Sons; 2014.
75. Rosen A, Byrne P, Goldstone S, McGorry P. Early intervention for better mental health services. In: Tasman A, Kay J, Lieberman J, *et al.*, editors. *Psychiatry*. New York: John Wiley and Sons; 2014. pp. 1–20.
76. Jeste DV, Palmer BW. *Positive psychiatry: a clinical handbook*. Arlington, VA: American Psychiatric Publication; 2015.
77. Rosen A. Mental health services: evidence-based components in the continuum of care. In: Mendoza J, Elson A, Gilbert Y, *et al.*, editors. *Obsessive hope disorder: reflections on 30 years of mental health reform in Australia and visions for the future*. Caloundra: BJA Graphic Design; 2013. pp. 239–251.
78. Johnson S, Lloyd-Evans B, Howard L, *et al.* Where next with residential alternatives to admission? *Br J Psychiatry* 2010; 197(S53):s52–s54.
79. Chung TE, Gozdzik A, Palma Lazgare LI, *et al.* Housing first for older homeless adults with mental illness: a subgroup analysis of the at home/Chez Soi randomized controlled trial. *Int J Geriatr Psychiatry* 2018; 33:85–95.
80. Bond GR, Drake RE, Becker DR. An update on randomized controlled trials of evidence-based supported employment. *Psychiatr Rehab J* 2008; 31:280.
81. Rosen A. Presidential invited lecture. American Psychiatric Association, Annual Meeting; San Francisco, CA; 2019.
82. McFarlane WR. Family interventions for schizophrenia and the psychoses: a review. *Fam Process* 2016; 55:460–482.
83. Bergström T, Seikkula J, Alakare B, *et al.* The family-oriented open dialogue approach in the treatment of first-episode psychosis: nineteen-year outcomes. *Psychiatry Res* 2018; 270:168–175.
84. Senge PM. *The fifth discipline fieldbook: strategies and tools for building a learning organization*. Crown Bus 2014.
85. Ranmuthugala G, Plumb JJ, Cunningham FC, *et al.* How and why are communities of practice established in the healthcare sector? A systematic review of the literature. *BMC Health Serv Res* 2011; 11:273.
86. Perkins R, Meddings S, Williams S, Repper J. *Recovery colleges 10 years on*. Nottingham: ImROC; 2018.
87. Shiers D, Smith J. Early intervention and the power of social movements: UK development of early intervention in psychosis as a social movement and its implications for leadership. In: Rosen A, Byrne P, editors. *Early intervention in psychiatry: El of nearly everything for better mental health*. Oxford: John Wiley and Sons; 2014.
88. Miller V, Rosen A, Gianfrancesco P, Hanlon P. Australian national standards for mental health services: a blueprint for improvement. *Int J Leadersh Publ Serv* 2009; 5:25–42.
89. García-Alonso CR, Almeda N, Salinas-Pérez JA, *et al.* Relative technical efficiency assessment of mental health services: a systematic review. *Adm Policy Mental Health Mental Health Serv Res* 2019; 46:429–444.