First CMHR Virtual Workshop:
"Advances of healthcare ecosystem research for evidence-informed mental health planning"
VIDEA Lab, CMHR, 12 November 2019

This virtual workshop includes the presentations made by the research reference network on "Glocal Mental Health Care" at the APIC2 – 2nd Asia Pacific Conference on Integrated Care, Melbourne 11-13 November 2019. The presentations were made in two sessions: "A new framework for Integrated Care" (Chaired by Dr Sue Lukersmith), and 8B: "Use of mapping and modelling tools for assessing the comparative effectiveness of Mental Health Care" (Chaired by Prof D. Perkins). This partnership is coordinated by the VIDEA Lab and includes researchers from ANU, University of Sydney, ConNetica and Loyola University Andalucia (Spain). This Virtual WorkshopsUniversities of NSW and Notre Dame

1. Use of the new paradigm of healthcare ecosystem research in mental health planning

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Abstract

INTRODUCTION: Health Ecosystems Research (HER) is a new discipline in implementation sciences that incorporates systems dynamics, context analysis, health economics and knowledge discovery from data. HER is particularly relevant for the analysis of integrated care.

METHOD: A collaborative strategy based on systems research has been implemented to regional mental health planning based on context analysis. The organisational learning strategy included: i) the development of the conceptual model, ii) atlases of regional Mental Health Care, iii) integrated resource utilisation analysis applying new units following the recommendations made by the PECUNIA group(*), v) geospatial analysis of administrative prevalence, vi) financing of mental health care, vii) cost of illness of sentinel conditions, viii) modelling of efficiency and organisational improvement.

RESULTS: All the blocks of this strategy have been used for policy including the regional mental health strategic plans in Catalonia and the Basque Country (Spain). From a summative perspective the main factors related to the success of the strategy have been 1) the agreement on the framework and drivers included a common taxonomy, 2) policy of full transparency by the public agency,3) the continuity of the planning team, 4) the multidisciplinary and flexibility of the reference network, 5) the development of a general framework for the collaboration, 6) the use of bidirectional multiple sources of funding, 7) the trust building process for effective knowledge transfer and bridging, 8) use of policy opportunities to increase the general knowledge base. Major challenges for implementation have been: 1) the need to accommodate the global strategy to specific short-time policy demands, 2) the lack of continuity of research funding and research teams, 3) the difficulty of information generated for practical use by decision makers and stakeholders without expert guidance, 4) the political cycles, 5) structural and administrative constraints in the Spanish public and research systems. This experience is being applied to local planning and expert-guided evidence informed policy in Australia.

DISCUSSION: The healthcare ecosystems and context analysis framework is key for evidence-informed regional planning. The Spanish case highlights the importance of an integrated health ecosystems approach for use of health economics data in the real world.

2. A Tale of Four Cities: Analysis of mental health services across four metropolitan Australian cities using the Integrated Atlas of Mental Health

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Abstract

INTRODUCTION: Understanding the availability, capacity and accessibility of services in a geographically defined region for any given health need or condition is imperative for sound policy and service planning. Between the second half of 2014 and early 2018, systematic mapping of the mental health needs and services was undertaken in nine largely urban Primary Health Care regions using the Integrated Atlas for Mental Health. These nine regions were located in covered almost the entire greater Sydney region, over 65% of the greater Melbourne region, all of Perth and the north Brisbane region.

METHOD: Service provision was analysed using the DESDE-LTC system for long-term care service description and classification that allows international comparison. Rates per 100,000 inhabitants were calculated to compare the care availability and placement capacity for children and adolescents, adults and older adults. Up to 15 population risk factors related to mental health, health status and mortality indicators were analysed for each region to highlight areas of higher need. Results were analysed along with the use of geo-spatial maps.

RESULTS: While the analysis shows only a small degree of variation in the availability of hospital based acute care, there are significant differences in the availability of other forms of residential services, particularly non-hospital forms. Low intensity outpatient social care services are also a dominant feature with few services related to employment or structured rehabilitation. High growth corridors in all outer metropolitan regions showed higher levels of risk for mental health and have significantly fewer services.

CONCLUSIONS: Across Australia, different terms are used to describe mental health services, particularly in relation to different forms of residential care and outpatient services. The use of the Integrated Atlas methodology enables a clear and comprehensive understanding of the spectrum of services, the relative capacity of those services for a region, their location, the needs of the population and the ability to identify gaps. The Atlas data also provides a basis for better understanding mental health outcomes. This presentation will provide an analysis of the findings from the Atlas mapping in four different PHN urban regions and raise issues of equity of access to mental health care in Australia. Lessons Learned: Significant structural reforms with the implementation of the National Disability Insurance Scheme and changes to funding for community mental health organisations is impacting on the stability of mental health services. As these changes roll out, analysis of services and population needs is required to ensure closer alignment. Limitations: Only universal access specialised services for adults and children have been studied. Suggestions for future research: Analysis of relative technical efficiency, geographical accessibility and workforce capacity.

3. Implementation of a comprehensive systems of integrated mental health service delivery in urban areas. Lessons learned from the Inner Sydney Urban Partnership for Health and Well-Being

Peter McGeorge. Universities of NSW and Notre Dame

Abstract

INTRODUCTION: Notwithstanding the high priority given to the development of systems of integrated mental healthcare in Australia in National and State Policy, little has been done to guide how this should be done, for whom, by whom and to what end. This presentation surveys the challenges involved based on the experience gained by a dedicated group of providers, funders, cares and consumers in NSW through the establishment of an Inner Sydney Urban Partnership for Health and Well-being. This initiative is referenced to other initiatives in Australia, albeit those that have been systematically developed are relatively rare or seldom reported. Learnings are shared and a framework for achieving more durable success in Australian settings is presented.

METHOD: The presentation is based on an a series of symposia held between 2015-2016, an implementation process undertaken by Synergia between 2016-2017 and a follow-up consultative process undertaken by the author in 2018 for St Vincent's Health Network, Sydney. Results From its inception there was considerable enthusiasm for a broad group of providers, funders, consumers and carer organisations working together. In Sydney by 2017 22 NGOs, the Central Eastern Suburbs PHN, Family and Community Services, Consumer and Carer Organisation's had become involved in the collaboration, early draft of protocols and bids for funding made. In addition the services had been surveyed by Professor Luis Salvador-Carulla and his team at SYDNEY University/ANU, using the Mental Health Atlas methodology which he had developed.

RESULTS: The basis for a robust integrated care network seemed to have been laid. However the loss of key personnel, restructuring within the lead organisation and a lack of shared financial commitment led to an abrupt loss of momentum in the implementation process. The 2018 survey showed however that there were other less obvious factors involved that are referred to under "lessons learned" that may have been equally critical in the outcome at the time. Nevertheless, continuing interest in re-establishing the Partnership was still evident in the 2018 consultation and in fact St Vincent's Mental Health Service has included the initiative in its Strategic Plan and is supporting research to underpin its re-development.

CONCLUSIONS: • Integrated Mental Health care is hugely challenging but is required by both Federal and State policy. • Stakeholder know that consumers benefit when services work together to focus on their needs and that things can go seriously wrong when they don't. • We need to learn from our failures as well as our successes. • Successful systems change requires vision, strategy, leadership and tenacity • Policy needs to be delineated into operational objectives and strategies • Horizontal integration at a Meso level and care coordination at a Micro-level is critical but so are clear Maco-level policy settings and resource commitment in the implementation process. Lessons learned • Lack of priority given to rapid gain, consumer focused initiatives • Work needed to be done to clarify and communicate the roles of the stakeholder group vis a vis "working partners" and " knowledge affiliates" • Insufficient attention to specifying and supporting common care pathways • The MH Atlas

could have been utilised as a basis for joint planning given the information contained in it relating to the services and staffing to be integrated. • Lack of clarity regarding working relationship of the UP to new funding programmes ~ PHNs, NDIS • There was a need for concrete and continuing support from LHD and Governance partners and direction and resourcing from the State • Structures can appear robust and enduring but are vulnerable to shifts in support and direction. Limitations None Suggestions for further research Research on integration needs to occur at Macro, MESO and Micro levels

4. Regional planning and the Implementation of Integrated Mental Health Care: the experience of Partners in Recovery

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Abstract

INTRODUCTION. Improved care integration is a core element for improvement of Australia's mental health services. This requires fundamentally better links between health-focused care and social and community-based supports. The fragmentation of Australia's health systems – ranging from a public hospital system funded and managed at state level and primary care at federal has created a series of fissures that have proved hard to bridge. Policy-makers have supported an institutional shift to local and regional action to overcome these historic splits.

THEORY/METHODS: This paper uses an institutional analysis of the Australian mental health system to identify some long-term elements shaping this continuity. It uses a recent innovative program, Partners in Recovery (PIR), to test the ability of a focused program break through these obstacles. From 2014-19 PIR combined a mental health recovery-based approach with an emphasis on building constructive partnerships between competing mental health providers. PIR was one of the few initiatives in mental health that specifically aimed to bring together primary health care, mental health and non-health services. Its approach by-passed existing structures and used more flexible, locally based approaches aiming at system change. Persistent failures to implement reform, despite widespread consensus on the need for change suggests deeper, systematic problems. The paper uses public policy institutional theory to identify structural problems facing mental health service integration. A narrative review of available evaluations of PIR programs across Australia assesses the degree action was based on knowledge of local services and problems. How far did each evaluated program identify bridging mechanisms across health and social policy and the mechanisms of 'partnership' between funding and delivery agencies in public and private (NFP) sectors? What information was used about local services to shape referral practices? What methods were used to gather information about the pattern of local services? Evidence from Integrated Mental Health Maps produced for PIRs is used to show local differences in services and programs across PIRs.

RESULTS. The evaluations had uneven information on the way individual PIRs tackled the problem of local knowledge and how they built referral networks. Approaches ranged from systematic mapping of mental health services through to more ad hoc or passive methods.

CONCLUSIONS. The variation in methods make systematic comparisons difficult, but PIRs that started from a systematic approach to planning were less likely to have crises of overload or mismatches between client load and referrals. Lasting institutional changes were difficult due to the instability of the program and its final attempted integration into the very different National Disability Insurance Scheme. Limitations: The research is based on publicly available evaluations and other papers on PIR. These include a national evaluation, but the local evaluations cover only a minority of PIRs. Suggestions for future research: More work needs

to be done on how new tools for mapping are used in policy and practice in developing regional and local approaches to service integration.

5. An international comparative analysis of the mental health care delivery system in remote areas: the Kimberley (Australia), Nunavik (Canada) and Lapland (Finland)

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Abstract

INTRODUCTION: Remote areas hold specific local and structural conditions that affect care availability and access, such as geography, population characteristics and service provision. Care in these areas is frequently scarce and fragmented and they are difficult to compare with similar areas in the same country. In order to plan effective integration, it is first necessary to perform a comparative analysis of the delivery system. This study aims to analyse the adult mental health service provision in three remote areas across the world.

METHODS: The study areas are the Kimberley (Australia), Nunavik (Canada) and Lapland (Finland) between 2018-2019. These areas are characterised by extremely low population density and high relative rates of indigenous population. DESDE-LTC system was used for the standard description of the service delivery system for mental health care, in combination with socioeconomic and health context analysis along with geographical maps.

RESULTS: The areas are deprived within their national contexts. Kimberley and Nunavik have a similar remoteness and their population centres are mainly connected by plane. Road passage in Kimberley and Lapland varies according to the season. Mental health services are mostly provided from the public sector completed with non-profit organisations. Specific cultural-based services for indigenous people have been identified in Kimberley, while every service is targeted to this group in Nunavik and none in Lapland. Kimberley has two specialised acute units in a general hospital. The consumers who require medium and long stay are referred outside of the area. There are no community residences in the area. Mobile outpatient services are more developed than in the other areas. Nunavik has two psychiatric beds in two general hospitals, while severe cases are referred to Montreal. Two psychiatrists visit the hospitals once a month. There are also several community residential settings. The remaining services are not specialised and deliver mental health first aid. Finally, a general hospital with one acute unit and two medium-long stay units is available in Lapland in addition to community residences. The care profile is completed with day care services, and balanced number of mobile and non-mobile outpatient care services. Limitations: Only universal access specialised services for adults have been studied. The results cannot be generalised to other remote areas with different characteristics.

DISCUSSION: The mental health care in Lapland is self-sufficient and its care pattern is similar to other Finnish areas, while Kimberley and Nunavik are especial cases in their jurisdictions and depend on external facilities for severe and long-term cases. The nonexistence of day care provision in the latter areas seems to be related to the isolation and dispersion of the population centres. Local contexts are essential in the study of mental health service provision. The knowledge provided may support decision-making for mental health policy and planning in remote areas. So far, service provision in remote areas has not received much attention even though their especial psychiatric morbidity. It is necessary to take into account local context. Analysis of relative technical efficiency, geographical accessibility and workforce capacity.

6. Modelling mental healthcare improvement in highly integrated care systems: the case of the Basque Country (Spain)

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Abstract

INTRODUCTION: Currently there is growing interest in providing integrated mental health care between hospital (acute residential care) and community-based services (… and other health systems). Mental health systems are complex due to the high disorder prevalence, socio-economic burden, stigma associated, and high gap of unmet population needs. Mental health can be considered an ecosystem related to, at least, physical health and social services ones. Decision support systems are robust tools for guiding and improving planning and management of health ecosystems by integrating methods like Bayesian networks. These models identify critical variables, domains and constructs and their corresponding causal relationships. The objective of this research is to design an integrated and integral theoretical Bayesian network for guiding mental health planning and management, and in consequence, improving mental health care delivery.

METHODS: The setting is the Mental Health Network of Gipuzkoa and Bizkaia (Basque Country, Spain). Data collection was carried out in 2013 for the Mental Health Atlas of Gipuzkoa and Bizkaia (2015). The main indicators are grouped in: availability, placement capacity, workforce capacity, discharges, average length of stay, readmissions, utilization of health day care services, and incidence, prevalence and visits for outpatient care services. The domains, subdomains and constructs were standardized by using the DESDE-LTC codification system. The causal relationships were identified and described by using explicit expert knowledge from mental health managers and researchers from Spain, United Kingdom, Finland, United States and Australia. Expert knowledge was elicited by using the Expert-based Cooperative Analysis (EbCA) model. In addition, we consider the results obtained in two previous systematics reviews on Mental Health planning and management.

RESULTS: The analysis identified the following constructs: mental health promotion and mental disorder prevention, information for care, self-help and voluntary help, community pharmacy, primary care, outpatient care, day care and residential care, being these the core of the Bayesian network. The constructs are interrelated bi-directionally. In addition, causal relationships between the core and the ecosystems physical health and social services were identified, linking the Mental Health ecosystem with the health environment. The identified constructs were developed in domains and subdomains, according to the DESDE-LTC codification system, in order to represent the real status (availability and adequacy) of a specific Mental Health ecosystem. Finally, variables are the seeds of the Bayesian network. Limitations: The number of variables (seeds of the model) is critical as well as the limitations of the DESDE-LTC codification system that has to be extended to include other types of care.

CONCLUSIONS: This is the first theoretical Bayesian network model that will let us to assess how balanced and integrated any real Mental Health ecosystem is. This model identifies the availability of the elements and their causal relationships can be used to assess an adequacy index according to the basic Mental Health community care model. The Bayesian network can be used in any Mental Health ecosystem worldwide. To improve mental health care planning and management, it is required to make evidence-informed decisions taking into account population needs, local characteristics and global influences.