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Editorial

Psychiatry in public mental health: easy to say, but harder to achieve†

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Summary
Psychiatrists are currently ill equipped to exploit the growing interest in public mental health. Training, service infrastructure and organisational links are deficient, which will impede population-based interventions. However, the potential benefits make correcting this worthwhile.

Declaration of interest
None.

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Background

Although psychiatric engagement with public health issues is long-standing, explicit reference to public mental health is recent. In the UK, the Department of Health identified it as a key policy on their website in 2011, and the Royal College of Psychiatrists' Special Interest Group in Public Mental Health was founded in 2012. In the USA, despite governmental health policy being more fragmented, the first dedicated textbook on the topic[1] was published in the same year. Although psychiatry and public health share many mental health interests, public mental health cannot be assimilated, as with other psychiatric specialities, to an application of psychiatric principles in a different operating environment, and a survey by Public Health England in 2013 found that, of all specialties, psychiatry had the lowest overlap between its training and that of public health.[2]

The need for a different approach

The phenomenological approach underpinning the diagnosis and treatment of psychiatric disorders means that these diagnoses are identified in individuals, who are also the unit of treatment. This approach is maintained even when psychiatry is delivered in the community at large, for example, through primary care, although the delivery models may be described as 'population-based'.[3] Public mental health, in contrast, concerns itself with the mental health and well-being of populations as a whole, and the difference this introduces cannot be overstated. It is now accepted that the proportions of different disorders, as well as severity, vary with progress through the mental healthcare system, so assessing the mental health of populations needs to capture distribution, as well as description, using an appropriate metric. Thus, questionnaire assessments, of secondary use in individual diagnosis, become the primary tool for assessing the mental health of populations. Psychiatric epidemiology has managed this difference by applying cut-offs to questionnaire scores to approximate patient groupings. However, when using scalar measures of physical or mental disorders, population mean scores predict associated disorder prevalences,[4] suggesting either may be used to estimate population health. This gives public mental health a significant conceptual advantage. For most psychiatrists, the detection and treatment of patients is the only way to reduce morbidity: for a public mental health practitioner this is but one route among many that might affect the population mean.

Health impact assessments

There are two main dimensions along which public mental health can extend the reach of conventional psychiatry, given that mental illness and mental well-being seem coterminous, at least for common disorders.[5] The first is to address population-level influences on well-being through policy advice, which may be evaluated by health impact assessments. Public Health England has been developing a methodology to include mental health – mental health impact assessments (MHIAs). There have been promising results, but the author lists of published MHIAs[6] suggest that psychiatrists are not typically engaged in their selection, design, deployment or feedback into policy. For example, Appendix 1 lists several individual and macro-economic factors affecting mental well-being,[7] some of which might be adjusted by judicious policy choice.

Appendix 1 makes two key points: much policy affecting mental well-being involves sectors outside psychiatry; and excess, as well as inadequate expenditure may harm mental health. Part of public health involves achieving the most cost-effective deployment of available health interventions, which emphasises good health economics. Even with good economic measurement, difficulties may arise when, as is common in public health, a health-related intervention is not provided by a health-based organisation. Based on 2009 prices, social and emotional learning programmes in schools costs £132 per child, borne by education. After 10 years, total public savings resulting from improved behaviour are £10 164. However, the total savings to education after this time are £186,[8] so there is little incentive for education to further develop the programme, as costs are barely covered in its current form. Perverse incentives such as these may have contributed to the failure of significant public mental health interventions. MHIAs that include an economic component, promoted in government by appropriately qualified advisors, could recommend that those departments that obtain most economic benefit from interventions are the ones to pay for them, reducing such risks.

†See pp. 192–194, this issue.

Logical framework matrix

The second dimension in public mental health – interventions across the whole population – is currently best discussed in children, where associations between population mean scores and prevalence have been published: for them, a 0.6 standard deviation reduction in population mean predicts a 1 unit decline in log-odds prevalence of psychiatric disorders.[5] So, whole-population interventions with effect sizes too small for clinic use could still produce worthwhile reductions in population prevalence. For example, a randomised controlled trial of a whole-school intervention for aggressive behaviour estimated a parent-reported effect size of 0.26.[9] Assuming a population prevalence for behaviour disorders of 6.5% for boys[10] the intervention could reduce this prevalence to 4.3%, a reduction of nearly 34%.

Most psychiatrists practice without relevant local epidemiology, which public health calls 'health intelligence' and regards as essential for planning appropriate service delivery. Much can be extrapolated from national epidemiology and service activity data, but the impact of locally important changes (such as the loss of a major employer or service reconfiguration) on communities is not directly measured. The complex data-set linkages necessary to detect these routinely are still in development,[11] so public mental health interventions, especially local ones, are currently difficult to evaluate. These evaluations are often of a different form to either conventional audit or research. Frequently, the intervention is well-understood, but the unknown is whether the intervention's environment will permit success, and how it might be favourably modified. A structure appropriate for these evaluations, the logical framework matrix, is shown at Appendix 2. Its cells are populated using the logical framework approach,[12] which is commonly used in international health and development, but not taught in domestic mental health delivery or research.

Early intervention

Another subtle, but significant difference between public health and psychiatry is in the use of the term 'early intervention'. In psychiatry, particularly in relation to psychosis, early intervention refers to intervention when at least some (psychotic) symptoms are present, but significant disability (or the full syndrome) has not yet had time to manifest. Public health would call this secondary prevention, reserving the first term for interventions occurring early in the natural history of the disorder. In public mental health, these would typically be primary prevention programmes, applied to young children. For example, interventions to reduce the prevalence and impact of early trauma might ameliorate the subsequent development of psychiatric disorders.[13] In the UK, this distinction became practically important between 2005 and 2009, when there was both a 16.5% reduction in children aged 0–4 and an increase of 27% in in-patients aged 15+ being seen by Child and Adolescent Mental Health Services (CAMHS), based on (respectively) CAMHS mapping and hospital episode statistics, in the context of increasing concern about early intervention. The public health definition is harder for psychiatry to implement, as the very low base rates inevitably associated with these interventions make adequate effect sizes hard to demonstrate, and the relevant proxy for outcome may not be a psychiatric disorder at all.[14] Overall, however, the evidence overwhelmingly supports the value and cost-effectiveness of perinatal and preschool public mental health interventions, for physical as well as mental health difficulties, across the whole population.[15] Therefore, interpretation of the government's focus on early intervention in psychiatric terms was associated with a reduction in the total amount of early intervention provided by psychiatry.

Conclusions

Training should thus, at a minimum, empower psychiatrists to effectively collaborate with public health colleagues in delivering population-level interventions, engage in MHIAs and coordinate goals. This is demanding because, as inspection of the journals cited in the HIA (Health Impact Assessment) Gateway[6] shows there is little professional overlap. Effective population informatics is the medical examination of public health, but much mental-health related UK data have limited resolution through infrequent collection and/or large geographical scale, so are most suited to evaluate large-scale interventions. Without more informatics investment, local interventions are likely to require dedicated evaluations, of a type that psychiatrists are not usually trained to undertake. Delivering local or large-scale population-level interventions also requires much closer integration between psychiatry and other community and societal institutions than currently, with more policy engagement. However, public mental health offers the possibility of reducing population prevalence of, at least, common psychiatric disorders by means other than a practically unachievable rate of diagnosis and treatment of individual cases, while simultaneously contributing to improvements in physical health, as the same risk factors affect both. In the absence of a 'disruptive' technological advance, which radically reduces the cost and improves the benefit of what can be provided from psychiatric clinics, adopting a public mental health approach to mental health service delivery and goals might be the best option for achieving further significant advances in mental healthcare.

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Appendix 1

Association between economic variables and mental well-being

Individual	
Income	Sigmoid curve of happiness *v.* income = relative relationship
Age	U-curve, uplift from 40s+
Health	Strong +ve relationship
Education	Strong +ve relationship
Employment	Students, pensioners and self-employed happier. Long-term unemployed happier than short-term unemployed
Gender	Women happier
Marital status	Married higher (very strong)
Number of children	Not significant
Macroeconomic	
Gross domestic product per capita	Higher is better, with some ceiling
Inequality of income	Less is better, although may be tolerated if stimulates growth
Inflation	Less is better
Corruption	Less better
Government spending	Overall spend correlates negatively, individual departmental spend (e.g. health) positively
Decentralisation	Less central control is better

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Appendix 2

Logical framework matrix[12]

Project description	Objectively verifiable indicators of achievement	Sources and means of verification	Assumptions
Goal: what is the overall broader impact to which the action will contribute?	What are the key indicators related to the overall goal?	What are the sources of information for these indicators?	What are the external factors necessary to sustain objectives in the long term?
Purpose: what is the immediate development outcome at the end of the project?	Which indicators clearly show that the objective of the action has been achieved?	What are the sources of information that exist or can be collected? What are the methods required to get this information?	Which factors and conditions are necessary to achieve that objective (external conditions)?
Outputs: what are the specifically deliverable results envisaged to achieve the specific objectives?	What are the indicators to measure whether and to what extent the action achieves the expected results?	What are the sources of information for these indicators?	What external conditions must be met to obtain the expected results on schedule?
Activities: what are the key activities to be carried out and in what sequence in order to produce the expected results?	**Means**: what are the means required to implement these activities, e.g. personnel, equipment, supplies?	What are the sources of information about action progress? **Costs**: what are the action costs?	What preconditions are required before the action starts?

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