

Mental health services and allocation of resources: where should the money flow?

I read with interest the Article by David Gyllenberg and colleagues,¹ which suggested that there was both an absolute and a relative increase in use of specialised services for all psychiatric diagnostic classes in adolescents born in 1997 compared with those born in 1987 (with the exception of schizophrenia, psychoses, and alcohol-related disorders in both sexes, and eating disorders in boys).

What makes this study unique is the large study population, which was made possible by obtaining data from nationwide health registers. The results of this study might offer important clues for mental health policy and resource allocations in the future. However, the study did raise some questions, especially for non-Finnish readers, which might need to be addressed by the authors.

One major conclusion of the Article was the need to allocate financial resources to specialised psychiatric public services (both inpatient and outpatient) for adolescents. The authors, however, did not elaborate on a vital aspect of mental health treatment in primary care. Resources allocated to mental health treatment in primary services in Finland actually increased by more than 150% from 2000 to 2010.² Unlike the authors' assumption that the increase in use of specialised services seen is due to a lower referral threshold for specialised services, one could hypothesise the opposite because more adolescents would be treated within primary care services, leading to a higher referral threshold. This uncertainty raises questions about the effectiveness of allocating additional resources to primary mental health treatment in Finland.

A very interesting finding is the absolute and relative decrease in

the use of specialised services by adolescents with schizophrenia, or more accurately, by boys and girls with early onset-schizophrenia. The numbers reported are limited as the authors indicated. However, the authors do not report whether specialised schizophrenia centres are available in Finland and whether these centres fell in the excluded districts. Early-onset schizophrenia is a devastating disorder, which usually has a poorer outcome than schizophrenia in adults.³ A 2017 meta-analysis by Immonen and colleagues⁴ reported significant correlations between younger age at onset and more hospital admissions, more relapses, and poorer social and occupational functioning. From a clinical perspective, and in view of the introduction of early intervention services widely in many high-income countries, I would expect the absolute numbers (at least) not to decrease.

Although Gyllenberg and colleagues did advise the readers to be careful about the representativeness of the findings of this study, I personally find the design and societal approach of this study unique and insightful. The study shows how useful and efficient the use of nationwide health parameters can be towards the implementation and planning of mental health services.

I declare no competing interests.

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- Gyllenberg D, Marttila M, Sund R, et al. Temporal changes in the incidence of treated psychiatric and neurodevelopmental disorders during adolescence: an analysis of two national Finnish birth cohorts. *Lancet Psychiatry* 2018; published online Jan 18.
- National Institute for Health and Welfare (THL). Health expenditure and financing 2010. Statistical Report No 5/2012. https://thl.fi/tilastoliite/tilastoraportit/2012/Tr05_12.pdf (accessed Feb 1, 2018).
- McClellan J, Stock S. Practice parameter for the assessment and treatment of children and adolescents with schizophrenia. *J Am Acad Child Adolesc Psychiatry* 2013; 52: 976–90.

- Immonen J, Jääskeläinen E, Korpela H, Miettunen J. Age at onset and the outcomes of schizophrenia: a systematic review and meta-analysis. *Early Interv Psychiatry* 2017; 11: 453–60.

Authors' reply

We wish to thank Morsi Abdallah for the interest in our Article¹ and for the thoughtful comments.

The first issue Abdallah discusses is mental health in primary care, referral thresholds from primary to specialised care, and our conclusions regarding allocation of financial resources. Primary care is essential because it plays a vital role in youth mental health services, and service delivery cannot be considered solely from a specialised service perspective. Because no primary-care data were available in our register-based study, we cannot give definitive answers about primary care. However, we still consider “lower referral thresholds” to be a more likely phenomenon than Abdallah's assumption that more adolescents are treated in primary care and that there might be a “higher referral threshold”. First, we would like to clarify that Abdallah's cited increased health expenditure of mental health treatment in primary care compromises all age groups—not only adolescents.² Between ages 12 years to 18 years, school health care is a major service provider in primary care, especially with regard to identifying mental health problems, and school health-care expenditure was rather stable in Finland between 2000 and 2010.² Second, in 2011, a government decree became effective requiring that all pupils in the 8th grade (aged 13–15 years) be offered an extensive health examination within school health care³ and official recommendations advise on the use of structured mood symptom assessment.⁴ To our best knowledge, scientific studies on the changes in identification and treatment of depression and anxiety in school health care are scarce, but plausible

hypotheses are that the use of structured instruments has led to increased identification and that stable financial resources in conjunction with requirements to perform extensive health examinations has led to less time for treatment.

The wider question—“where should the money flow?”—is more complex, but in the light of our study findings, we conclude that diagnosis of disorders encompasses the ethical duty to arrange adequate treatment. Whether evidence-based treatment is arranged in primary care, specialised services, or elsewhere are matters of patient symptomology and local arrangements, but clearly require financial resources.

Abdallah’s second question relates to early-onset schizophrenia. In Finland, the university clinics have highly

specialised units, but no centres are exclusively specialised in early-onset schizophrenia. The largest hospital district, Helsinki and Uusimaa Hospital District, was included in our main analyses.¹ We also wish to point out that the results from the analyses without any hospital exclusions were very similar to the main analyses (see supplemental figure 3 in the Article appendix).¹

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- 1 Gyllenberg D, Marttila M, Sund R, et al. Temporal changes in the incidence of treated psychiatric and neurodevelopmental disorders during adolescence: an analysis of two national Finnish birth cohorts. *Lancet Psychiatry* 2018; 5: 227–36.
- 2 National Institute for Health and Welfare in Finland. Health expenditure and financing 2010. Statistical Report No 5/2012. Helsinki: National Institute for Health and Welfare in Finland, 2012.
- 3 Minister of Health and Social Services. Government Decree 338/2011 on maternity and child health clinic services, school and student health services and preventive oral health services for children and youth. April 6, 2011. <http://www.finlex.fi/en/laki/kaannokset/2011/en20110338.pdf> (accessed April 24, 2018).
- 4 Ministry of Social Affairs and Health. Maternity and child welfare clinics, school and student health care and preventive oral health care - grounds and application directives for decree (380/2009). Sosiaali- ja terveystieteiden ministeriön julkaisuja 2009:20 (in Finnish). <http://urn.fi/URN:ISBN:978-952-00-2942-5> (accessed April 24, 2018)