

## Editorial

# Early intervention for psychosis in low- and middle-income countries needs a public health approach

Saeed Farooq



## Summary

Early intervention in psychosis has significantly improved outcomes compared with standard treatment but it is considered as a luxury for low- and middle-income (LAMI) countries. However, a public health approach that is based on the principles of supplying all essential medication free of charge for at least the first 2 years of illness, medication

being taken under supervision of a caregiver and treatment following a standardised treatment algorithm can prove a cost-effective early intervention model for LAMI countries.

## Declaration of interest

None.

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About 80% of first episodes of psychosis occur between 16 and 30 years of age.<sup>1</sup> The predominantly younger population of low- and middle-income (LAMI) countries (for example in Pakistan 42% of the population is below 45 years age) means that the great majority of those developing first-episode psychosis worldwide live in these countries. Duration of untreated psychosis (DUP), which was a catalyst for early-intervention services in high-income countries, is almost twice as long in LAMI countries as that reported in high-income countries (125.0 *v.* 62.5 weeks).<sup>2</sup> The median DUP, a more reliable measure in view of the skewed nature of DUP, is also much longer. Moreover, contrary to well-known epidemiological evidence of a better prognosis for schizophrenia in LAMI countries, a longer period of DUP is associated with a poorer response to treatment and greater subsequent disability. The risk of death in patients who receive even minimal treatment was reported to be significantly lower than that of patients who received no treatment.<sup>3</sup>

There are now hundreds of early intervention programmes worldwide, mostly in high-income countries. A systematic review of early intervention services that included eight randomised controlled trials, most with up to 2 years follow-up, showed that participants receiving these services were less likely to relapse or be admitted to hospital and had significantly reduced rates of discontinuation for any reason when compared with standard care.<sup>4</sup> A long-term follow-up study evaluating an early-intervention programme, found that the improvement in clinical outcome achieved at 2 years was not sustained at 5 years. There was no statistically significant difference between intensive early treatment and standard care in the primary outcome of improvement in symptoms at 5-year follow-up, although a significantly smaller percentage of patients in the early-intervention group were living in supported housing and were admitted to hospital for fewer days.<sup>5</sup>

I will argue that early intervention for psychosis in LAMI countries should be based on the public health models that are currently being used for infectious and non-communicable disorders. It should not be a specialist service like those established in many high-income countries, but instead it should be based

on integrating the services within existing healthcare programmes for infectious and non-communicable disorders, involving non-specialist mental health services, supporting family members in providing care and raising awareness about early diagnosis and treatment available for schizophrenia.

## Why a public health approach?

The high prevalence, effects on vulnerable and economically productive populations, costs to society and the availability of effective interventions that can be applied at a population level mean that schizophrenia fulfils most criteria required for a public health approach.<sup>6</sup> Schizophrenia is the sixth leading cause of years lost due to disability (YLD) in LAMI countries. Put into perspective, iron deficiency anaemia, which is a major public health priority in these countries, causes 2.4% of total YLD, whereas schizophrenia is responsible for 2.8% of all YLD.<sup>7</sup> Schizophrenia causes more disability than osteoarthritis and only slightly less than that caused by cataracts in LAMI countries.<sup>7</sup> Evidence from LAMI countries shows that interventions for disorders such as schizophrenia are affordable and just as cost-effective as, for example, antiretroviral treatment for HIV/AIDS.<sup>8</sup>

Most people with schizophrenia in LAMI countries receive little or no treatment. In a cohort of 321 patients with schizophrenia who were identified systematically by screening large populations in rural Ethiopia, the majority (89.6%) were treatment-naïve at entry. During 5-year follow-up, only about 6% had received antipsychotic treatment continuously.<sup>9</sup> There seems to be a causal link between endemic poverty and access to treatment for psychosis. In a study that investigated DUP and its relationship with gross domestic product purchasing power parity (GDPppp) based on International Monetary Fund data, we showed that in LAMI countries an additional \$1000 of per capita GDPppp was associated with a decline in mean DUP of 10 weeks.<sup>2</sup> Therefore, a public health approach that ensures free access to treatment as discussed below can go a long way in reducing this unacceptably long DUP.

## The paradigm for early intervention in psychosis

It is evident that early intervention in psychosis needs to become a major public health priority in LAMI countries, perhaps more than any other part of the world. The primary aim in LAMI

countries should be to ensure access to treatment at the earliest possible stage. The emphasis should be on preventing relapse by regular supply of essential medication, maintaining treatment adherence, engaging service users and treating emerging symptoms effectively.

One approach suggests that all patients presenting with first-episode psychosis should be provided with free access to treatment during the initial critical period.<sup>10</sup> The treatment is provided using a standardised approach and progress is monitored with the help of simple outcome measures. The medication is provided under close supervision of a relative, who is trained for this purpose, or a health worker.<sup>10</sup> A brief family education programme that has been implemented and evaluated in a LAMI-country setting can be used for this purpose.<sup>10,11</sup> A programme that provides free access to treatment and monitors outcome and adherence with taking medication is only feasible if it is time limited. Most early intervention programmes in high-income countries focus on the initial 3–5 years in first-episode psychosis. The empirical evidence for the optimum duration of such programmes is lacking. In view of economic constraints, it is suggested that early intervention programmes in LAMI countries should target at least the initial 2 years after diagnosis, the ‘critical period’ in the course of the illness, which is the strongest predictor of long-term outcome and disability.<sup>12</sup> This is also consistent with evidence that shows that clinical interventions targeting non-adherence in schizophrenia should continue for at least 18 months.<sup>13</sup>

Early intervention services in high-income countries rarely aim to reduce long DUP,<sup>4</sup> as this is not feasible because of schizophrenia’s low incidence and a lack of easy-to-detect markers for its early diagnosis. However, the exceptionally long DUP in LAMI countries results from different cultural, religious and economic factors,<sup>3</sup> which may be more amenable to preventative efforts. Most patients with first-episode psychosis are referred by relatives and traditional healers. This could be addressed by a population-based programme to improve awareness about the disorder and the services available through establishing a close network of community mental health workers with members of grass-root health services and social welfare organisations.<sup>9</sup> In rural communities, key informants, individuals who are familiar with the health status of members of the community they live in, can assist with this and have been shown to be cost-effective.<sup>14</sup> In urban centres, educational programmes for general practitioners and primary care workers to help raise awareness about early diagnosis and treatment will be required. Access to free treatment as part of a public health programme that is widely publicised can lead to heightened awareness and early help-seeking over time.

It can be argued that focus on the early phase of psychosis can divert meagre resources from later phases of the illness and other health priorities. Ideally, care should be provided through all phases of illness but this is a far cry for most LAMI countries, where less than 1% of the health budget is spent on mental health. The provision of effective care during the critical period in the initial years will help to reduce severe disability in the long term. In the absence of formal social care networks and an almost total lack of rehabilitation, chronic disability leads to poverty<sup>7</sup> and breakdown of the informal systems of care, resulting in grotesque conditions and violations of human rights. Estimates for providing a core package of care for schizophrenia concluded that the cost for this will neither be large when compared with other disorders, nor make unreasonable demands on overall budgetary allocations.<sup>8</sup>

Early intervention based on this model will help to put mental health on the public health agenda, the lack of which has been identified as one of the key barriers to service development.<sup>8</sup> It

is vitally important that small-scale programmes are piloted and the lessons learnt from these programmes should then be used for devising population-based services not only for early intervention in psychosis but for other psychiatric disorders. A public health intervention such as this will be the best practical measure to reduce stigma. When patients’ conditions improve with the restoration of their social functioning, the community’s explanatory model of schizophrenia often shifts from a magico-religious to a medico-social viewpoint. A service based on these principles will also help to provide very useful epidemiological information that could inform treatment, prevention and guidelines for management of schizophrenia in resource-poor settings, which are lacking at present. The resources must be mobilised for a global fund for such a public health programme. Patients with psychosis in LAMI countries may be among the most disadvantaged people on earth. They deserve access to basic treatment as much as those with conditions such as HIV and tuberculosis, for which many poor states around the world provide free access to treatment.

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