Integrating evaluative research and community-based mental health care in Verona, Italy

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Verona is a city of about 260 000 inhabitants, located in northern Italy, half way between Milan and Venice and on the route from Italy to central Europe. It is a historical city with impressive Roman and medieval monuments. Verona is also a modern and affluent city, with a commercial and industrial centre and a university that includes a school of medicine with a good reputation.

Within the school of medicine there is an institute of psychiatry, established in 1970 and including an adult psychiatry research group. In 1980 the University of Verona established a new Chair (the Chair of Medical Psychology, subsequently renamed the Chair of Psychiatry) and a new Department, primarily devoted to evaluative research in mental health, but also involved with teaching and clinical work. This occurred at the same time as the reform of the Italian mental health system (Law 180), with the subsequent establishment of the South Verona Community-based Mental Health Service (South Verona CMHS). The evaluative research conducted in the Department was therefore primarily dedicated to the monitoring and evaluation of the South Verona CMHS, using an epidemiological framework. Instrumental to this purpose has been the setting up of the South Verona Psychiatric Case Register, established in January 1979. Since that time many integrated and evaluative research projects have been completed and disseminated, with more than 120 papers published in peer-reviewed journals. Thus, the South Verona Service is one of the most intensively evaluated mental health services in the world.

In 1978 in Italy a new National Health Service (NHS), providing free health care to all Italian citizens, replaced the existing national insurance system. The new NHS also incorporated the public psychiatric system, which had just undergone a radical reform under Law 180. According to this law, all psychiatric hospitals were closed to new admissions (and, after 3 years, also to readmissions) and were replaced with community-based services and psychiatric units based in general hospitals. The new system was intended to provide care and support to all types of patients, without back-up from public mental hospitals, where only existing long-stay in-patients could remain (Tansella, 1986).

The research team first established in 1970 is now part of the Section of Psychiatry, at the Department of Medicine and Public Health of the University of Verona, the umbrella organisation responsible for both teaching and clinical activities, as well as research. The clinical branch, the South Verona CMHS, provides a comprehensive and well-integrated spectrum of services to a population of about 100 000 inhabitants who live within a defined geographical area in the south of Verona. These services include: in-patient, day patient and out-patient care, rehabilitation, community care (including home visits), a 24-hour emergency service and residential facilities for long-term patients (three apartments and one hostel). The CMHS avoids restrictive selection procedures for patients and also provides relevant training opportunities to medical and postgraduate students. The clinical model, a public health one, is characterised by continuity of care – both longitudinal continuity (through the different phases of treatment) and cross-sectional continuity (through the different components of the service) (Tansella *et al*, 1998; Thornicroft & Tansella, 1999). All research team members also participate in teaching and clinical responsibilities (Burti & Mosher, 1986). In 1987 the Section of Psychiatry of the University of Verona was designated by the World Health Organization as a collaborating centre for research and training in mental health and service evaluation.

WORK PERFORMED AND ONGOING

Service use over time and factors affecting patterns of care

The South Verona Psychiatric Case Register, covering the area served by the CMHS, monitors all contacts that South Verona adult residents have with in-patient services (including private psychiatric clinics and hospitals) and community mental health services (Tansella, 1991). The Register and *ad hoc* surveys provide a basis for studies of service use and patterns of care over time. The following studies have been completed: longitudinal patterns of care; in-patient care prior and subsequent to the Italian psychiatric reform; long-stay and long-term patients; comparisons between South Verona services and other Italian and European services with a different system of care; exploring the relationship between population socio-demographic characteristics and service use; identification of the operational criteria of continuity of care; studies of mortality among psychiatric patients (Tansella *et al*, 1986, 1995; Sytema *et al*, 1989, 1996, 1997, 2002; Tansella & Williams, 1989; Balestrieri *et al*, 1994; Amaddeo *et al*, 1995, 2001; Gater *et al*, 1995; Ruggeri *et al*, 2000; Rossi *et al*, 2002).

Outcome project (OUT-pro)

This study aims to investigate various aspects of the outcomes of psychiatric care, comparing different treatments and forms of intervention with a naturalistic and longitudinal approach; to identify topics of interest for experimental studies; and to promote standardisation of routine clinical assessments. Studies completed so far have identified a set of measures to be used routinely at service level and the most useful multivariate statistical methods for summarising these effects. Analysis of conditional independence and other graphical methods have recently been used as integrated statistical tools to model the relationships between variables in outcome studies (Ruggeri & Tansella, 1995; Ruggeri *et al*, 1998, 2002; Lasalvia *et al*, 2000, 2002; Tansella & Thornicroft, 2001).

Cost evaluation in mental health

This programme evaluates the cost of mental ill health and of mental health care by the means of: (a) identification of all relevant services; (b) data collection on patients'

receipt or utilisation of health services (direct costs) and other services and resources within the socio-economic system (indirect costs); (c) attachment of monetary values to the various elements of service use. A detailed unit cost list was constructed, covering psychiatric services, other public and private health services, criminal justice services, voluntary organisations and self-help groups. Statistical analyses are conducted at the level of the individual patient, and multivariate analyses are also conducted to test for associations between annual costs and groups of patient characteristics considered simultaneously. A new instrument, a standardised interview for collecting data necessary to calculate the costs, was used to collect the data required to calculate the costs of community care for individual patients. Studies already completed have calculated the direct costs for all South Verona patients who had contact with psychiatric services in a single year, and for all patients having their first lifetime psychiatric contact in the same year (Amaddeo *et al*, 1997, 1998; Mirandola *et al*, 1999; Healey *et al*, 2000).

Studies in general practice

Studies completed so far cover the development and assessment of instruments; assessment of total and conspicuous psychiatric morbidity in general practice settings; prescription of psychotropic drugs; and referral to psychiatric services. This work was very much influenced by Michael Shepherd (Tansella, 2003). We are currently developing a methodology for assessing appropriateness and quality of drug treatment for depression in primary care. A procedure is in development that will enable researchers to assess general practitioners' (GPs') therapeutic decisions on the basis of standardised information routinely collected in primary care clinics. At a later stage an educational programme will be developed and evaluated with the aim of providing GPs with the information, as well as the skills, that they need to improve their ability to identify and manage depression. Other ongoing work in this field involves the identification of factors related to GPs' recognition of psychological distress, and patient variables that influence the disclosure of psychosocial problems to GPs (Bellantuono *et al*, 1987, 2002; Pini & Tansella, 1999; Rizzo *et al*, 2000).

Communication in medicine

This programme analyses verbal interaction between doctors and patients during a consultation. The quality of communication in the medical interview is a major factor in determining whether doctors collect accurate data concerning all the health problems of their patients within a reasonable time period and whether they successfully inform and educate the patients with regard to the main aspects of their physical and psychological health (Zimmermann & Tansella, 1996). Reliable, standardised procedures for measuring and classifying GPs' and psychiatrists' styles of communication during the interview have been developed: the Verona Medical Interview Classification System (VR–MICS) and the Verona Psychiatric Interview Classification System (VR–PICS). The main aim of the studies in progress is to use these, together with other instruments, to evaluate the effect of training packages on the communication skills of GPs and psychiatrists in training (Del Piccolo *et al*, 1998, 2000, 2002).

Evaluation of efficacy and side-effects of psychotropic drugs

Randomised controlled trials on the efficacy and side-effects of psychotropic drugs are routinely reviewed and the main findings are summarised in review papers and meta-analyses (Barbui & Hotopf, 2000, 2001; Furukawa *et al*, 2002) and in educational packages for medical students, psychiatrists in training and GPs.

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NEW INITIATIVES AND CHALLENGES FOR THE FUTURE

Projects for the future include a greater collaboration with other research groups sharing the same interests in evaluative service-level research, in particular with the European Network for Mental Health Service Evaluation (ENMESH).

To date, such collaboration has produced two studies, with the participation of research teams in five European countries: the European Psychiatric Services: Inputs Linked to Outcome Domains and Needs (EPSILON) study and the Quality of Life following Adherence Therapy for People Disabled by Schizophrenia and their Carers (QUATRO) study. The former, a comparative cross-sectional study of care for people with schizophrenia, has already been accomplished. The latter is a randomised controlled trial of adherence intervention therapy compared with a supportive control intervention for people with an acute episode of schizophrenia. Both have been funded by the European Community and the QUATRO study has just entered its second year of operation. Recently, a new multi-disciplinary research group was brought together in Verona, to study the relationships between genetic factors, functional and morphological anomalies, clinical severity and course of schizophrenia. An integrative approach is used, combining genetic techniques and brain imaging methods with clinical data obtained from the South Verona Psychiatric Case Register.

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in service and cost evaluation in mental health; Corrado Barbui, Lecturer in Psychiatry. His main areas of interest are in clinical psychopharmacology and social psychiatry; Cesario Bellantuono, Associate Professor of Psychiatry, with main areas of interest in evaluating the efficacy and side-effects of psychotropic drugs; Lorenzo Burti, Associate Professor of Psychiatry, with main areas of interest in community mental health and psychosocial approaches for the care of long-term service users; Lidia Del Piccolo, Lecturer in Clinical Psychology, with main areas of interest in communication in medicine; Nicola Garzotto, Associate Professor of Psychiatry, whose main fields of interest are in procedures and guidelines of good clinical practice in mental health services; Mirella Ruggeri, Associate Professor of Psychiatry, with main interests in the assessment of the quality of life and outcome evaluation in mental health; Orazio Siciliani, Professor of Psychotherapy, interested in the evaluation of psychotherapy; Christa Zimmermann, Associate Professor of Clinical Psychology, whose interests are in communication in medicine and the evaluation of training in communication skills.

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