investigation of "the therapeutic process" is going to give us the answer as to whether psychotherapy was worthwhile in the first place.

Some of the problems in evaluating outcome of psychotherapy are shared with clinical research in general, while others are unique to psychotherapy. The adequacy of controls is a universal problem. The ideal situation of matched identical twins for treatment and non-treatment groupings is no more available to pharmacologists than to psychotherapists. Many workers agree, however, that by using age of onset, duration of disease, sex, and diagnosis as the minimum essentials for comparability of two patients, a workable control situation can be established. Obviously the first 3 parameters are as available for the evaluation of psychotherapy as for that of any other treatment, but it is the last, i.e., diagnosis, that raises particular methodological problems. As long as the essential nature and cause of mental disease are unknown, and there continues to be disagreement among qualified persons concerning the broadest designations of mental disease, diagnosis will be imperfect and unreliable. But disputes about diagnosis can be circumvented for the purpose of a particular research project by a rigorous definition of terms or by the application of clearly outlined symptom complexes for matching of patients.

Recent work in our own laboratory has provided tools which make the life of the evaluator more bearable. By means of systematic interview in which molecular aspects of behavior can be recorded as present or absent, an objective evaluation of the traits and behaviors which characterize the patient at the time of his admission, at release and on follow-up can be readily obtained. These instruments are: (1) The Mental Status Schedule, Spitzer, R. L., Burdock, E. I. and Fleiss, J. L., for use by psychiatrists; (2) The Structured Clinical Interview, Burdock, E. I. and Hardesty, Anne S., for use by clinical psychologists; (3) The Ward Behavior Inventory, Burdock, E. I., Hakerem, G., Hardesty, Anne S., and Zubin, J.
for use by nurses and attendants. The latter two of these instruments have already demonstrated their usefulness in the evaluation of outcome of drug treatment and of intensive milieu therapy. (Cole, J. O., in press; Goldberg, S., Cole, J., and Clyde, D., 1963.)

At the present time these tools are being evaluated for their utility in two areas: (1) severity of illness, and (2) prognosis under specified treatment. It is clear that if we can specify both of these criteria and standardize our instruments against them, we can arrive at a much better basis for evaluating outcomes. Two individuals with similar prognoses should have similar outcomes under two equivalent therapies or different outcomes under non-equivalent ones. An interesting conflict often arises in the mind of the clinician in prognostic studies. When the prognosis is very poor, the clinician usually redoubles his efforts under the assumption that the case he is treating has the 1 in 1,000 chance of making a recovery. This leads in some situations to undue self-adulation in success and to breast-beating in failure. In others, the failures are soon forgotten and only the successes are remembered. By providing prognostic baselines in a regular manner, the attention of the research clinician can be focused on those with good prognosis who failed and those with poor prognosis who succeeded, while the good as well as the poor prognoses which were borne out by experience can be laid aside. Surprising failures and unexpected successes can do more in furthering our understanding and improving our prognoses than can expected successes or expected failures.

The problems of control are serious, but not necessarily insuperable. It is evident that there is no uniformity among mental health workers with respect to usage of such terms as "cured," "recovered," or "improved." But this problem is not unique to psychiatry. These terms are, after all, in the vocabulary of acute diseases like appendicitis or strangulated hernia, and are as imprecise in chronic conditions such as tuberculosis or cancer as they are in schizophrenia. Tubercle
bacilli may be eradicated from the sputum and symptoms may disappear, but if the over-all life expectancy has been shortened, can the patient really be called "cured?" In cancer therapy it is customary to refer to five or ten year "cures;" the arbitrariness of such terms to an individual patient do not compromise their use in evaluating treatments for cancer. It is clear that explicit and precise criteria for outcome are necessary in any satisfactory clinical evaluation. Freyhan's concept of "target symptom," which the therapy specifically attempts to reduce or eliminate, is an example of the type of precision that can be introduced.

What are the implications of these revolutionary changes for public health? It is clear that the current revolution has returned the patient to the family and community. How well is the public health worker prepared to play a role in this revolution? What can he do to maintain the level of tolerance of deviant behavior that is necessary for keeping the patient at home? In cases of patients who require maintenance drug therapy, what can the public health nurse do to insure the ingestion of the maintenance dosages? The public health nurse who already plays a role in the family seems to be ideal agent to maintain contact with the returned patient. She must also be sensitized to detecting psychopathology in other members of the family which is now permitted to go undetected until it is too late. But such awareness must be encouraged with due regard to the varying social-cultural norms in our population. With half of the population below 21 years of age, the need for having a better understanding of adolescents and children from the different social-cultural-ethnic groups seems paramount. Recent developments in geriatrics involving a similar consideration of societal norms and the attempt to devise more appropriate methods of assessment of illness and care, will demand new attention on the part of public health workers.

One cannot escape the conclusion that, in order to meet the challenges of the current revolution, the public health field will have to undergo a considerable
revolution of its own. Even though the interest of the public health worker remains anchored in his discipline, he must get a wider exposure to the entire spectrum of psychopathology if he is to meet future challenges. How to train him to appreciate the entire spectrum—which ranges from anthropology and sociology and social psychology through physiological, sensory, perceptual, psychomotor and conceptual behavior to genetics, biochemistry and brain function—is a paramount problem. If we do nothing else, we must develop the flexibility which will permit a person to transcend the limitations of his specific education and accept the challenge of the new things that are to come.

Among the new areas which is bound to attract attention is the predicament of the poverty-stricken fifth of a nation that is so much in need of help. Our tests, our interviews, our techniques are all standardized on the middle or upper class. It is true that a large portion of the poverty-stricken population is unable to pay for assessment and therapy, but funds for such efforts are becoming available. It is up to our professions to be in the vanguard in breaking through the barrier that has kept one fifth of the population from educational and occupational opportunities and has thereby increased the hazard of illness. With regard to therapy, medical personnel may have to share the administration of drugs with other specialists: the need is that great. It is quite likely that the drugs needed to control depression or anxiety will eventually be as safe as aspirin. If so, this will mean that sufficient training in and understanding of differential physiological responses to drugs will have to be given to public health officers and others for them to be their own masters in this area.
References


