Turning now to the group of cases dying within a month after direct admission (and putting aside the senile cases), we find an interesting series of cases of acute confusion or delirium with definite physical disease. Such toxic cases include lobar pneumonia, influenza, nephritis, pulmonary abscess, pyosalpinx, acute Graves disease, and peritonitis following perforated gastric ulcer. Several of these cases were admitted in a moribund state, and the lives of some might have been saved had an early diagnosis of the underlying condition been possible.

In the Tenth Annual Report of the Board of Control it is pointed out that deaths from cancer in mental hospitals are much less frequent proportionately than in the community at large. Cancer causes 12% of the total adult deaths in England and Wales, but only 3% of these in the county and borough mental hospitals, and this (3%) is the figure at this hospital. This, to my mind, is a most interesting fact, and the difference is so great that it cannot arise by chance. Our knowledge of the ætiology of malignant disease is as yet so indefinite that we can merely conjecture. The majority of mental patients are of the so-called cancer age-45 to 50—(the average age of our direct admissions here is exactly 45), and yet the incidence of the disease is very small. If we accept the view that malignant disease is preceded by some chronic irritative process, it appears possible why mental patients are to some extent immune. The most common sites for the disease are, in the female sex, cervix uteri and breast, in the male sex, tongue and lip, and in both sexes, œsophagus, stomach, colon and rectum. It is plain that residents in a mental hospital have little chance of being the victims of a recent erosion of the cervix—the forerunner of carcinoma—and the women that are admitted as mental patients between the ages of 40 and 50 are not the happily married mothers, but, as a rule, the disappointed spinsters. As cancer of the breast equally affects women who have borne children and nulliparæ, it is not surprising to find that this is by far the most common form met with among women in a mental hospital, but the death-rate can be kept very low by early diagnosis and up-to-date surgery.

As regards epithelioma of the tongue and lip, of which excessive smoking is universally considered to be the exciting cause, it is easy to see that this factor is to all intents and purposes ruled out under mental hospital conditions, and therefore this form does not arise among mental patients. The sources of irritation which contribute to carcinoma of the alimentary tract may be considered to be food and drink swallowed too hot, highly seasoned articles of food, possibly excessive meat-eating, and habitual constipation. Under mental hospital régime patients have wholesome plain food, seldom, I should say, served too hot, and routine aperient medicine by preventing chronic constipation may be said to minimize the irritation of colon and rectum. This beneficent dose, whether in the form of pill, powder or fluid, should also receive due credit for that remarkable absence of intra-peritoneal conflict among mental patients.

## OBITUARY.

WILLIAM CHARLES SULLIVAN, M.D.,

Medical Superintendent, State Criminal Lunatic Asylum, Broadmoor.

The State has lost a highly valued and distinguished officer by the death of Dr. William Charles Sullivan on February 26 in his fifty-eighth year. Even those of his friends who were aware that he was in indifferent health were quite unprepared for the news of his death. They anticipated that his condition would improve, and hoped that he would be able to carry out those projects for the future he had in mind. The youngest son of William Kirby Sullivan, Doctor of Philosophy and President of Queen's College, Cork, he was educated at Cork, Dublin and Paris. He was an Exhibitioner and Prizeman of Queen's College, Cork, and graduated M.B., B.Ch., B.A.O. at the Royal University of Ireland in 1891, and received the diploma in Psychological Medicine in 1892, and the Stewart Scholarship in Mental Diseases and the degree of M.D. in 1893. In the following year he continued his studies in the asylums and hospitals of Paris, and attended the School of Anthropology under Prof. L. Manoeuvrier. And it may well be that the work he did with the latter first directed his naturally inquiring

and scientific mind towards the study of criminal conduct, and decided his future career.

He joined the English Prison Service in the year 1897. To members of this Association the most interesting of his testimonials will be one from Conolly Norman, with whom he worked for over a year at the Richmond Asylum. The then President of the Medico-Psychological Association was obviously impressed by Sullivan's abilities, which were already shown to be of an exceptional order.

His first official appointment was on the medical staff at Liverpool Prison, whence he was transferred in due course to Parkhurst, Pentonville and Holloway Prisons. And in 1912 he was chosen to become the first Medical Superintendent of the State Criminal Lunatic Asylum at Rampton, which was then opened. So thoroughly did he justify his selection, that when Sir John Baker relinquished the post of Medical Superintendent of Broadmoor State Criminal Lunatic Asylum in 1920 Sullivan succeeded him, and held the office with conspicuous success until his death.

It was fortunate that of the four prisons at which Sullivan served from 1897 to 1912, three, Liverpool, Pentonville and Holloway, were particularly rich in material for research into the social causes of intemperance and its connection with attempted suicide, insanity and crime. And in the preface of his well-known book, Alcoholism: A Chapter in Social Pathology, published in 1906, he showed his appreciation of the opportunities afforded by his official position as prison medical officer, and stated-"It is on the study of the human documents of alcoholism which have thus been brought within my reach that this essay is mainly based." This volume, the result of an extended research, is characterized by the temperate presentation of the subject, and its scientific impartiality lends weight to the author's conclusions. In his summing-up he says: "We find that the extent of the alcoholic evil is represented by a considerable contribution to the amount of suicide; by a share in the causation of crime which, though small in relation to the total mass of delinquency, is of extreme importance by reason of the specially grave character of the offences comprised in it; by a comparatively small part in the causation of insanity; and lastly by an indefinite but certainly considerable influence in the production of many of the conditions of impaired development which underlie the perverted conduct of the socially unadaptable classes." He also concluded that nearly all the graver effects of intemperance were due to chronic intoxication, and hardly any to simple drunkenness except in one variety of sexual crime, namely, rape on adults. He considered the alcoholic evil in this country was "connected very much more with industrial than with convivial drinking, more with the use of alcohol as an aid to work than with its use as an aid to pleasure," and it is interesting to observe that even at this date he suggested that the most obvious and probably one of the most effective measures wherewith to combat industrial drinking would be an alteration of the hour of opening licensed houses. This work in particular caused its author to be recognized as an authority on alcoholism, and in 1916 he was appointed one of the distinguished members of the Advisory Committee to the Central Control Board (Liquor Traffic). The conclusions representing the unanimous judgment of this Committee were published in 1918, and it is needless to say were an authoritative and practical review of the state of scientific knowledge concerning the action of alcohol on the human organism.

Attention has already been called to the importance that Sullivan attached to industrial drinking, but investigations concerning the influence of alcohol on muscular energy, chiefly conducted with the ergograph were not always conformable. Many observers held that with moderate doses of alcohol the initial increase of energy was shortly followed by a disproportionate decrease of energy, with the result that its total effect on muscular work was disadvantageous. Rivers, taking special precautions to exclude the influence of suggestion, found that doses of 20 c.c. alcohol had no definite effect of any sort on the ergographic record, and under Sullivan's direction a series of experiments were carried out in munition factories to determine this point if possible. The workers who volunteered to co-operate in the experiments were unacquainted with the nature of the drug administered to them in a flavoured mixture, and the alcohol so given was little more than the equivalent of a pint of beer at 4 per cent. strength. Careful control tests were also made. In some 20 subjects similar results were obtained in each case. This limited number was recognized to give only provisional results,

requiring later confirmation, but the conclusions then arrived at were: That in the case of those subjects engaged in hard muscular work the dose resulted in a subjective sense of increased vigour, and in less marked degree by men doing less arduous work; that in no instance had the dose objectively any appreciable effect on muscular work, and the output of work was neither increased nor diminished; that after about three hours the sense of stimulation and lessened fatigue induced by the alcohol passed off, and the subject felt the need for another dose.

In a paper published in this Journal in 1900 Sullivan insisted that alcoholism was the predominant cause of attempted suicide. A similar conclusion was arrived at by another observer in a paper published in the Journal some years later, and it may be of some interest to mention that whereas 210 cases of attempted suicide were received on remand or awaiting trial into Brixton Prison in the year 1912, only 49 cases were received in the year 1922. Doubtless many factors have contributed to produce this result, but there can be no doubt in the minds of those with a practical acquaintance of the subject that the lessened amount of alcoholism following upon the liquor restrictions has materially affected the number of admissions and justified Sullivan's thesis.

The years he spent in the Criminal Lunatic Asylums were likewise marked by his indefatigable industry, and in the midst of his exacting administrative duties he found time to pursue his investigations, and he was appointed Lecturer on Criminology and Forensic Psychiatry at the Maudsley Hospital, and annually delivered a series of lectures as part of the course of post-graduate instruction in psychiatry organized by Sir Frederick Mott at that hospital. In the year 1924 his work on Crime and Insanity was published, and received immediate recognition as the most important contribution to the subject that had appeared in this country for many years. Surprisingly few of the statements in this work are really challengeable in view of the controversial nature of the subject, and the volume is written with the conciseness, lucidity and nicety of expression with which his readers had come to associate the author. One of the most illuminating chapters is that on Crime in Transitory Conditions of Mental Disorder, and his observations on alleged amnesia in accused persons are worthy of study by all those whose duties cause them to examine the mental condition of prisoners awaiting trial.

Sullivan, like many others, was not satisfied with the existing legal test of criminal responsibility, and in a discussion which took place at a meeting of the Hunterian Society of London in 1922 on "The Position of Insanity in Criminal Law," remarked that "It was sufficient simply to follow the parallel of other countries by the simple statement that responsibility was barred by the existence of a state of disease," and he considered this "was a perfectly intelligible formula, which could be fairly interpreted by the judges." But perhaps it might be less clear in practice to juries, who are in fact the judges; they might not always be in a position to distinguish between the initial stages of a pathological process and a slight abnormal variation of character, which Sullivan admitted was not necessarily a condition calling for any relaxation of the law. He did, however, concede that "in practice the legal doctrine of criminal responsibility has been innocuous; it has not produced its logical consequences, because it has never been fully applied."

Sullivan was a Fellow of the Royal Society of Medicine, and a member of the Society for the Study of Inebriety and the Eugenics Education Society. He was a member of the Criminal Responsibility Committee of this Association which reported to Lord Atkin's Committee on Crime and Insanity; and as far back as 1894 became a member of this Association. Two years later the Journal published what is believed to be his first paper, entitled "Note on a Case of General Paralysis with Marked Sensory Symptoms." Other papers followed: "A Note on the Influence of Maternal Inebriety on the Offspring," 1899; "The Relation of Alcoholism to Suicide in England," 1900; "Alcoholic Homicide," 1900; and "Crime in General Paralysis," 1902. He also reviewed for the Journal from time to time, and in 1921 contributed a masterly appreciation of Sir Bryan Donkin's admirable Lectures on Mental Defect and Criminal Conduct, which were delivered at the Maudsley Hospital. Among his other writings are an article on "Criminology of Alcoholism," Kelynack's Drink Problem, 1907; "Rapport au Congrès Internat. Penitent de Bruxelles 1900, sur l'Influence de l'Alcolisme sur le Criminalité," and "Mesure de l'Intelligence chez les Delinquantes," Ann. Psychol., 1912. He

contributed an article on "The Psychology of Murder in Modern Fiction" to the Gentleman's Magazine, November, 1904; an article on "Industrial Alcoholism" to the Economic Review, April, 1905; and one on "Shakespeare's Othello as a Study of the Morbid Psychology of Sex" to the XIX Century and After, June, 1919. Further, he was an Editorial writer to the Lancet. A student of many languages, a great and profound reader, with cultured and varied literary tastes, he was a keen and reliable literary critic. Possessed of marked literary ability, his writings gained force from the clear and succinct manner in which he was accustomed to present his scientific expositions on controversial subjects, and his common-sense opinions were founded upon wide practical experience.

It is well to remember that Sullivan's clinical material was frequently difficult of approach. His investigations were conducted not only at the bedside, but in public-houses and labourers' dwellings, in docks, factories and workshops; and it seems probable that his acute intellect, alert observation, unflagging industry and discerning judgment might have been less successful had they not been combined with a sympathetic understanding of human weaknesses. It can be truly said that in dealing with difficult cases he practised not only the science but also the art of his profession, and became en rapport with his patients with facility.

Apart from his work he had no particular hobbies, but-

"There is unspeakable pleasure attending the life of a voluntary student,"

and it is as an earnest student and seeker after truth, as an erudite sociologist and psychiatrist that he will be remembered. A man of steadfast purpose, personal charm and kindly manner, he commanded the affection of his colleagues and rivals. The writer of these lines remembers being present, in 1912, with the rejected candidate for the post of Superintendent of Rampton, at the house of a mutual friend, when Sullivan, whose appointment as such had just been confirmed, entered. Snatching obsolete weapons from their host's walls the successful and rejected candidate engaged in combat, to the delight of the onlookers and their own amusement.

He leaves a widow, herself a gifted writer, whose sympathy and interest in her husband's work was constant, and one son, who is Vice-Consul and Secretary to the Legation at Bagota, and who has been Charge d'Affaires and Acting Consul-General for some months.

W. N. E.

[Abstract of Obituary Notice by Raymond A. Dart, Dean of the Faculty of Medicine, Journ. of Nerv. and Ment. Dis., November, 1925.]

JAN MARIUS MOLL, M.D.

Ordinary Member since 1911.

Death has taken grievous toll of the medical profession in South Africa and of the psychiatrical staff in the University of the Witwatersrand in particular by removing from their midst the serene, distinguished and lovable figure of Jan Marius Moll. Born in 1879 in the town of Blumendal, at Meerenberg Asylum, Holland, he was reared in a psychiatrical atmosphere, for his grandfather was Superintendent and his father was a First Assistant there.

During his student days he gained the distinction of the Gold Medal of the University of Utrecht for his able embryological investigations. Illness demanded his leaving Holland for the more genial climate of Heidelberg, Germany, where he was appointed to the staff of a mental hospital. This determined his subsequent career, for under Nissl (Heidelberg), and later Dubois (Switzerland), the neurological training he had received under Winkler and Heilbronner at Utrecht bore fruit.

Fortunately for the high veldt of South Africa, the lure of her sunshine and elevation and the vista of her future appealed to him, and after taking an English qualification (L.S.A.) and holding an appointment at Long Grove Mental Hospital, Epsom, he joined the staff of the Westkopjies Mental Hospital, Pretoria, in 1911, where his abilities soon found expression. The classification of the patients was revised, routine laboratory examinations were systematized, and the present intelligence tests, adapted to South African needs, were introduced. He went to Johannesburg in 1915 as a Consultant in Mental and Nervous Diseases, and found