As man makes his world smaller, more complex, and more life-threatening, the need for education of the public in health matters increases. This, then, is Dr. Armstrong's legacy to public health workers. He believed in education and in man's ultimate ability to conquer his social and health problems through this process.

Dr. Armstrong was essentially a shy, modest person, and to some this made him seem unapproachable. He was a scientist with the courage of his convictions to the very end, as his last wishes demonstrated. He forbade any funeral or burial service, and requested that his remains be released for medical science and research.

Public health has lost one of its grand elder statesmen, a masterly medical administrator, and a pioneer health educator. To those privileged to know him he was a witty, kindly, and generous human being. His intellectual interests did not preclude enjoyment of good company, good eating, good music, and an active outdoor life.

(The Journal is indebted to George M. Wheatley, M.D., for the above editorial. Dr. Wheatley is Senior Medical Director, Metropolitan Life Insurance Company, One Madison Avenue, New York, N. Y. 10010.)

Oxygen Therapy and Retrolental Fibroplasia

RETROLENTAL fibroplasia, first described in 1942, occurs almost exclusively in premature infants during the first three months of postnatal life. About 30 per cent of the infants who develop the disorder become blind. Oxygen administered in concentrations in excess of that in air for prolonged periods of time was identified in the early 1950's as the sole and sufficient causative agent.

At a symposium on retrolental fibroplasia, held during the 1954 meeting of the American Academy of Ophthalmology and Otolaryngology, participants recommended (1) that routine administration of supplemental oxygen to premature babies be discontinued; (2) that it be given only if infants are cyanotic or show signs of respiratory distress; and (3) that oxygen therapy be discontinued as soon as respiratory distress is relieved.

As the use of oxygen was drastically curtailed in nurseries throughout the world, the incidence of retrolental fibroplasia dropped sharply, although cases which result in blindness in some children are still seen. Since the current trend in pediatric medicine for the use of oxygen is toward a determinative policy, rather than a rigid, restrictive policy, a critical evaluation of the practice was considered imperative to determine whether infants were being subjected to an increased risk of RLF.

For this reason, a special conference of North American pediatricians, ophthalmologists, physiologists, pathologists, and biophysicists was convened on June 15 and 16, 1967, in Des Plaines, Ill. Sponsored by the National Society for the Prevention of Blindnes, Inc., under a grant from the National Institute of Neurological Diseases and Blindness, the conferees considered new problems posed by current practices of oxygen administration in the management of hypoxemic prematurely born infants. The objectives of the conference were to promote improved communication and cooperation in the investigation of the results of current oxygen therapy, with particular reference to the risk of retrolental fibroplasia.

Respiratory Distress Syndrome

Respiratory distress syndrome (RDS) is observed in roughly 10 per cent of neonates born before 37 weeks of gestation, and is the most frequent single cause of death among neonates. There is evidence which suggests that deaths

associated with this disorder increased during the decade of rigid oxygen restriction (1955-1965) in nurseries for premature infants, and there is also evidence which suggests that the frequency of neurologic sequelae, e.g., cerebral palsy, rose as the incidence of retrolental fibroplasia fell.

In the past two or three years, a concerted effort has been made to improve the outcome in hypoxemic infants with neonatal respiratory distress by administering supplemental oxygen in concentrations sufficient to relieve arterial desaturation. Moreover, asphyxia in the immediate neonatal period is treated by resuscitation and exposure to high concentrations of oxygen (80 to 90 per cent) in an effort to forestall the development of RDS by decreasing pulmonary arterial tone, and thereby increasing pulmonary blood flow. If the infant's condition stabilizes, the oxygen concentration is lowered slowly after 24 hours. In some nurseries, high ambient oxygen is continued until the expiratory grunt, which is virtually a constant sign in RDS, disappears. In others, treatment with high oxygen continues for only the first two or three hours after birth.

These oxygen administration practices are usually monitored by serial measurement of oxygen tension and saturation in arterial blood or arterialized capillary blood. However, the facilities for reliable measurements of arterial oxygenation are not available in most hospitals, and it is feared that undetected hyperoxia may occur under these circumstances. Moreover, there is considerable disagreement concerning the interpretation of arterial oxygen measurements in various sites, such as the radial artery, the temporal artery, and the abdominal aorta below the ductus arteriosus, with respect to the risk of retrolental fibroplasia. Evidence concerning the untoward effects of hyperoxia on other organs, especially the lungs and the brain, is accumulating. These effects will undoubtedly play a role also in the eventual decisions concerning the optimum method for treating hypoxemia in newborn infants.

Points of Discussion

Considerable discussion centered around these issues:

1. Criteria for supplemental oxygen administration.
2. The need for accumulating evidence on the association of clinical signs, arterial oxygen measurements, funduscopic appearance, and psychomotor development in oxygen-treated infants.
3. The need for improved devices for monitoring ambient oxygen concentration.
4. The need for caution in administering supplemental oxygen when appropriate observations, as indicated above (No. 2), cannot be made.
5. The need for basic research in factors which control vasomotion.

Conclusions

The conference succeeded in emphasizing the current importance of increased understanding of mutual problems by pediatricians and ophthalmologists. Premature infants with major illnesses can be treated adequately only in optimally manned and fully equipped intensive care units. Current support for these facilities is woefully inadequate. Ophthalmologists must examine every premature baby receiving supplemental oxygen, and the eyes of children born prematurely should be examined regularly for the first two years of life.

Participants in the conference agreed that revised recommendations for oxygen administration are highly desirable, but that currently available data are insufficient to justify a revision of the present cautious recommendations. A vital need exists for extensive research in these areas, along with the accumulation of considerably more clinical data.

Subsequent meetings of this kind are clearly necessary, and it was suggested that the Academy of Pediatrics should

be invited to participate officially in the next meeting.

(The Journal is indebted to William A. Silverman, M.D., for the above editorial. Dr. Silverman was formerly with Columbia University College of Physicians and Surgeons, New York. N. Y., and is now Director of Perinatal Health Center, Children's Hospital, San Francisco, Calif.)

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LETTERS TO THE EDITOR

To the Editor:

I have read with much interest the lead editorial in the July, 1968, issue of the Journal. I agree heartily with the general import of the editorial in its endorsement of support for various current legislative proposals submitted to Congress in efforts to "establish thoughtful bases for national health policy development." To the extent that the federal government can legislate and implement "national health policy"—and we all know this becomes a more significant question with each new session of Congress—the maximum degree of order and focus within the federal establishment is to be sought and welcomed by all who have an interest in health activities in this country.

I am concerned that, while most of these legislative proposals are devoted, necessarily, to federal health policy and federal health programs, the titles chosen thus far for the mechanisms to be created convey a broader impression and might readily be confused with the National Health Council by which I am employed, to which APHA along with 60 other national health organizations belong and which, so far as I know, is continuing to perform the functions for which it was created in 1920.

Dr. Leroy Burney, President of the Council, has written to Senator Edward M. Kennedy on this point and has asked that, if his proposals progress, efforts be made to avoid confusion of identity between new federal mechanisms and existing private organizations. I hope that the "health workers and citizens" to whom you addressed your editorial will also bear in mind that in endorsing and supporting legislative efforts to formulate coherent federal health policy and a coordinated approach to federal health programming, more confusion is not encouraged through imprecise identification of the vehicle.

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To the Editor:

We have read with interest the application of Bayes' theorem to routinely collected demographic data, as described in the paper, "The Use of Demographic Characteristics in Predicting Length of Stay in a State Mental Hospital" by W. W. Daniel, et al. (A.J.P.H., May, 1968).

To test our understanding of the method with a view to making practical use of it, we applied to equation 3 (p. 941) the stated values: $P(Y_1) = .129$; $P(Y_2) = .871$; and Table 4 probability values, with items 8 and 12 as shown (incorrectly?) in Table 4 (<30 days, .80 and .22) and also as shown in Table 3 (<30 days, .20 and .52).

We have been unable, however, to