tures to suggest that this difference may be due in part to the fact that women, during the period under consideration, have entered the occupational fields in large numbers and are thus exposed to new hazards.

These studies indicate salient characteristics of tuberculosis mortality which are of interest to the worker in public health. Effective control of the disease will in the future demand a more complete understanding of the factors causing differential death rates at various ages and in dissimilar areas.

JEAN DOWNES

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MUNICIPAL COSTS OF SYPHILIS

A CAREFUL evaluation of the costs of a disease as manifold in incidence and in pathology as syphilis is a gigantic undertaking. Perhaps for this reason the subject has been approached from various special angles such as the cost of treatment in private practice or the costs of clinic service. Among these special angles of approach, one—the community cost of syphilis—should be of interest not only to the sanitarian but to every other citizen as well. The sources of data for such a study are various depending upon the community and resort must be had to estimate where financial records do not permit of determining the precise costs.

A pioneer study of costs in this country was conducted in St. Louis in 1932 by the Missouri Social Hygiene Association in cooperation with the American Social Hygiene Association under the immediate direction of H. C. Loeffler of the St. Louis Bureau of Municipal Research.[1] The author states at the outset that no attempt is made to differentiate the costs of gonorrhea and those of syphilis, and further, that some of the estimates made are, at best, approximations. Particularly is this true of the estimates of the amounts paid by patients to private practitioners. The author attempts a comprehensive study but declines to evaluate costs in such fields as "Losses to Industry and Society," where even the basis of estimate is ill-defined. The final figure for the annual costs in the City of St. Louis is considered to be between $2,071,395 and $2,559,916. The St. Louis study beside being a pioneer attempt has the merit of outlining

[1] Loeffler, H. C.: Costs of Venereal Disease to St. Louis. A pamphlet published by the Missouri Social Hygiene Association, 340 North Vandeventer Avenue, St. Louis, Missouri.

many of the directions in which economic losses due to venereal diseases occur, and the difficulties encountered in computing them.

A second, and more conservative attempt at municipal cost evaluation is that of Thompson, Brumfield, and Caldwell[2] for the City of Baltimore, in 1932. They emphasize the fact that syphilis is, economically, of far greater importance than gonorrhea, and restrict their study, therefore, to that disease alone. The pitfalls of a comprehensive attempt at cost evaluation are outlined and the study consequently restricted to "such data as could be determined with reasonable accuracy." This narrowed the field primarily to the expense to the taxpayer and to endowed charity of the diagnosis and treatment of syphilis, thus retaining the cost aspect of the greatest public interest and eliminating, to no small degree, the need for estimates. The authors point out that the St. Louis total for syphilis, derived in this way, would have been in the neighborhood of $300,000.

The factual findings of the study were grouped under five chief items of cost, and are summarized below.

Hospitalization. In the thirty-three hospitals and institutions whose records were reviewed, a total of 2,214 patients were found to have had a diagnosis of syphilis, but only 615, or less than one-third, were found to have been hospitalized primarily on account of the disease. The authors determined the hospital costs of this group only, and found that they totaled $75,236.93; of this sum 66 per cent was paid by City and State taxpayers, 29 per cent chiefly by endowed charities, and only 5 per cent by the patients themselves.

Clinic Service. The cost data here were calculated on the basis of total number of visits and actual or estimated cost per visit. The total was considered to be $61,597.82. Of this amount it was found that 47 per cent was paid by the taxpayers of the City and State. Fragmentary data on receipts from patients made the allocation of the balance questionable, but $7,512.48 is known to have been paid by patients in one clinic reported upon. They further point out that the under-financed City clinics are restricted to the treatment of actually or potentially infectious cases and that hospital clinics are overcrowded and cannot always take care of patients needing treatment.

Serologic Laboratories. The cost here was determined by the total number of specimens other than those performed in private laboratories, and the cost per specimen (in some cases estimated). The figure of $35,285.86 was considered to be low for the City as a whole.

Anti-syphilitic Drugs. Data from this study were reported to be in-

[2] Thompson, W. C.; Brumfield, W. A.; and Caldwell, Lucille: The Direct Cost of Syphilis in a Representative American City. *American Journal of Syphilis, Gonorrhea, and Venereal Diseases,* May, 1936, 20, No. 3, p. 243.

	Total Costs	Paid by Patients
Total	$180,748.06	$11,063.83
Costs of hospitalization	75,236.93	3,529.35
Costs of ambulatory clinics	61,597.82	7,512.48[1]
Costs of Wassermann laboratories	35,285.86	
Costs of anti-syphilitic drugs	7,234.17	
Costs of hospitalization probable but not proved syphilis	1,393.28	22.00

[1]Receipts from one clinic alone were available.

Recapitulation of costs.

complete, so that the total of $7,234.17 was considered likewise to be a minimal one.

The authors give the accompanying table by way of summary and state that the total of $180,748.06, minus the amount paid by patients, was $169,684.23, the direct cost of syphilis to the City of Baltimore for the year 1933. Of this latter sum, they estimate that 55 per cent was paid by taxpayers and 45 per cent by endowed charity.

The fact that the authors have erred, if at all, on the side of underestimate, makes these figures the more impressive.

The authors have gone further than the mere tabulation of costs and have shown one of the prime values of this type of study—the directions in which the present expenditures are inadequate and the ways in which ultimate economy could be effected. In estimating the cost per laboratory specimen examined in various laboratories they show that this varies between 11 cents and $5.00 depending upon the number of specimens examined annually and suggest that small laboratories account in part for high costs in this field.

Their final and perhaps most important conclusion is that, in view of the large total expenditure for the hospitalization of late cases of syphilis, a very important saving could be effected by increasing the sums available for clinic—particularly for city clinic—treatment so that latent as well as active cases can be adequately treated before the conditions requiring hospitalization develop.

They leave with the reader the conclusion that many other cities besides Baltimore, with a per capita tax expenditure of not far from 10 cents, and with extensive aid from endowed institutions in the treatment of syphilis, require a still greater outlay to cope with all forms of the disease.

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