## TREASURY DEPARTMENT <br> UNITED STATES PUBLIC HEALTH SERVICE

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## VENEREAL DISEASE INCIDENCE AT DIFFERENT AGES

A TABULATION OF 8,413 CASE REPORTS IN INDIANA

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## VENEREAL DISEASE INCIDENCE AT DIFFERENT AGES.

## A Tabulation of 8,413 Case Reports in Indiana. ${ }^{1}$

By Mary L. King and Edgar Sydenstricker, Statistician, United States Public Health Service.
In a preceding publication ${ }^{2}$ emphasis was placed upon the need for statistical data relating to the incidence and prevalence of venereal diseases. It was pointed out that such data, when properly analyzed, would assist in defining more clearly the particular problems involved at this stage of the antivenereal disease campaign and might afford some guidance in determining the directions in which preventive effort might be most effectively expended. In the absence of complete records of venereal-disease prevalence in typical population groups, particularly in relation to various social conditions that probably influence its incidence, the suggestion was made that case reports should be utilized to the full extent of their practical value.
In accordance with this suggestion, certain tabulations and analyses of the case reports of venereal diseases in several States are being undertaken in the Statistical Office of the United States Public Health Service. This work necessarily is an experiment because of certain known limitations of the data. In the first place, on no possible assumption can these case reports be regarded as including all of the cases of venereal diseases actually existing or occurring within a given period for any locality or area. In the second place, they are probably restricted to certain types or stages-to those cases which were at stages when infected persons were impelled to seek a physician's advice. Cases which were latent or which exhibited no acute or troublesome symptoms may be regarded as almost wholly unreported. The reports can be considered, therefore, at best as only samples of this general type in various population groups and classes. It is realized that special care must be taken in any analysis of them, and that a great deal of caution must be exercised in drawing definite conclusions. Obviously such observations as can be made must be stated in relative terms rather than in terms of actual incidence, and conclusions drawn therefrom can be regarded as only tentative. But, in spite of these limitations, it was felt that the material contains certain information which would be of distinct value were it made available. Furthermore, it was believed that practical suggestions for improving the system and methods of venereal disease notification would be afforded only if an actual attempt were made to utilize some of the ever-accumulating reports.
Through the courtesy of the State Board of Health of Indiana, about 8,400 white case reports of venereal diseases were made avail-

[^0]able for study. These reports, while incomplete for any single detail, show for large proportions of the cases the following information: Nativity, sex, age, marital condition, and occupation of person affected; and for each diagnosis the duration and stage of the present attack, the source of infection, and place where exposure to infection occurred. In the present paper only the distribution according to age of cases of gonorrhea, syphilis, chancroid, and their various combinations is considered. The age distribution is compared for the different diseases as well as for persons of different sexes andmarita? conditions. Further presentation of the data in other details is planned for a later article.

Since the cases actually reported can be considered only as a sample of the total number of cases of a given trpe actually existing among the population of Indiana, the nssumption is necessary that the age distribution of this sample is similar to that of the total. The validity of such an assumption is, of course, debatable, but, in our opinion it is a reasonable one, within broad limits, for two reasons: (1) A large proportion of the cases were reported by physicians practicing in families, who had the opportunity for observing the incidence of disease in a population whose age distribution approaches that of the general population of a community or section; (2) while a certain proportion of cases, especially at certain ages, did not come to the attention of the family physician, these cases probably constitute a considerable part of the clientele of the specialist and of the clinic. The reports of the latter class of cases would tend to counterbalance the failure of family physicians to see them in the course of their practice. The indicated variations in age incidence based upon case reports must, however, be regarded as open to serious question. Only when an accurately observed incidence among a definitely enumerated population is available can we be certain of the true variations for a given population group.

The term "age" as here employed is the age at which infection occurred, or "age at onset." It is doubtful whether or not the reports are as accurate in this respect as could be desired. The age at onset was computed for each case from the record of the "duration" of infection and of the age of the patient at the date on which the report was made. In many cases the data as to duration of infection were incomplete. The age at onset, therefore, for any group may be regarded probably as somewhat too high, especially for unmarried men, although a comparison of the age distribution of cases where no data as to duration were given with that of cases where the age at onset could be determined did not indicate any marked divergences.

A summary of the cases under consideration is given in Table I, in which the cases are classified according to diagnosis and the sex of the person affected. Fifty-six per cent, or 4,708 of the total cases,
were affected with gonorrhea; 35 per cent, or 2,969, with syphilis; and 2 per cent, or 188 , with chancroid. There was a total of 8,413 cases, the additional 548 cases representing the various combinations of gonorrhea, syphilis, and chancroid. Gonorrhea and chancroid were relatively more frequent among male cases of venereal diseases, and syphilis relatively more frequent among female cases. The combination of gonorrhea and syphilis was found in over 10 per cent of female cases as against only 3 per cent of male cases.
Table I.-Number of cases of venereal diseases among white persons reported to Indiana State health department Jan. 1, 1918-Mar. 1, 1990, and proportion of total cases which were speciffed infections, by sex.

NUMBER.

|  |
| :--- | :--- | ---: | ---: | ---: |

a Including cases for which sex was not stated.
Table II.-Number of reported cases of venereal diseases according lo age and sex among white persons in Indiana.

| Renoried ago at onset. | All venereal diseascs. |  | Gonorrhea. |  | Syphilis. |  | Chancroid. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Female. | Male. | Female. | Male. | Female. | Male. | Female. |
| Total.. | 6,136 | 1,930 | 4,000 | 909 | 2,174 | 1,132 | $30 \%$ | 22 |
| Under 15. | 72 | 105 | 26 | 60 | 48 | 53 |  |  |
| 15. | 24 | 58 | 18 | 49 | 6 | 21 |  |  |
| 16. | 87 | 78 | 67 | 57 | 22 | 34 |  |  |
| 17. | 179 | 117 | 137 | 85 | 45 | 42 | 6 |  |
| 18. | 333 | 150 | 265 | 100 | 75 | 72 | 14 |  |
| 19. | 463 | 170 | 363 | 95 | 108 | 98 | 13 |  |
| 20. | 426 | 130 | 307 | 73 | 121 | 76 | 28 | 1 |
| 21. | $4 \times 9$ | 116 | 355 | 59 | 138 | 74 | 26 |  |
| 22. | 388 | 111 | 285 | 57 | 105 | 69 | 26 |  |
| 23. | 303 | 89 | 253 | 53 | 115 | 46 | 16 |  |
| 24. | 367 | 116 | 234 | 51 | 136 | 78 | 22 |  |
| 25-29. | 1,229 | 286 | 792 | 130 | 445 | 176 | 60 |  |
| 30-34. | 683 | 165 | 389 | 69 | 290 | 108 | 42 |  |
| 3.5-39 | 486 | 121 | 257 | 38 | 231 | 88 | 26 |  |
| 40-44. | 243 | 53 | 114 | 14 | 128 | 41 | 14 |  |
| 45 and over...... | 304 | 65 | 148 | 9 | 161 | 56 | 15 |  |

The number of cases of all venereal diseases and of gonorrhea, syphilis, and chancroid is given in Table II, in which the cases are classified according to age and sex groups. In the appendix more detailed tables may be found, showing the number of cases of all venereal diseases and of gonorrhea, syphilis, and chancroid, by single years of age at the time of onset for both sexes and varions marital conditions.

The distribution of cases according to age does not, of course, afford a true picture of incidence unless the population at the various ages is taken into consideration. Since the reports are incomplete, a morbidity rate per 1,000 of population is misleading and should be avoided. But while we can not properly use morbidity rates, we can find the relative variations in incidence by utilizing a series of ratios computed by the following method:

First, the percentage distribution of the 1910 white population in Indiana was computed in such detail according to age as the census reports permitted. Second, the percentage distribution of the venereal disease cases was computed according to age, using the same groups as were employed in obtaining the distribution of population. Third, the percentage of cases in each age group was divided by the percentages of the population in the corresponding age group. This was done for both sexes and for all venereal diseases, as well as for gonorrhea and syphilis separately. Using the broader age groups published for persons of different marital conditions, similar computations were made for venereal diseases among males and females of different marital conditions.

Table III.-Relative variationsa in the incidence of venereal diseases according to age and sex among white persons in Indiana.

| Reported age at onset. | All yenereal disenses. |  | Gonorrhea. |  | Syphilis. |  | Chancroid. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Fernale. | Male. | Temale. | Male. | Female. | Male. | Female. |
| Under 15... | 4 | 18 | 2 | 20 | 8 | 10 |  |  |
| 1.5. | 21 | 161 | 25 | 202 | 15 | 09 |  |  |
| 16. | 74 | 202 | 87 | 26 | 52 | 150 |  | 45 |
| 17. | 151 | 317 | 177 | 4.16 | 107 | 104 | 101 | $23 \times$ |
| 18. | 277 | 377 | 338 | 446 | 176 | 309 | 232 | 441 |
| 19. | 402 | 468 | 452 | 503 | 204 | 45 | 224 | 1,202 |
| 20. | 369 | 334 | 409 | 302 | 290 | 332 | 48.4 | 225 |
| 21. | 423 | 327 | 475 | 32. | $3 \cdot 11$ | 336 | 454 |  |
| 22. | 319 | 300 | 391 | 304 | 267 | 324 | 466 | 242 |
| 23. | 32.1 | 24 | 315 | 281 | $2 \times 9$ | 25 | 28.1 | 241 |
|  | 338 | 334 | 331 | 28.1 | 3 y | $3 \times 3$ | 403 | .......... |
| 25-27. | 239 | 174 | 236 | 153 | 244 | 183 | 232 | 217 |
| 30-34. | 153 | 1.16 | 134 | 9. | 184 | 130 | 148 | 186 |
| 35-39 | 113 | 91. | 91 | 55 | 1.51 | 113 | 120 | 66 |
| 40-14 | 64 | 4.5 | 16 | 23 | 95 | 60 | 74 | .......... |
| 45 and over. | 21. | 1.5 | 15 | $t$ | 32 | 22 | 21 |  |

[^1]The resulting ratios are not morbidity rates. They may be described as indices of the variations in age incidence of the disease or diseases in question among persons of specified sex and marital condition. Obviously, if all cases were reported and the population was enumerated accurately for the specified period during which the cases occurred, the indices or relative variations thus obtained would be the same as those based on morbidity rates.

Tho indices of age incidence for both sexes are given in Table III and are plotted in Figures 1, 2, and 3. Three indications may be noted: (1) That venereal diseases have their highest incidence in the young adult ages between 17 and 25 ; (2) that gonorrhea apparently


Figure 1.
tends to reach its highost incidence earlier than do syphilis and chancroid; (3) that the incidence of each of the three diseases occurs at younger ages among famalos than among males.

The peak in incidence for females is definitely at the age of 19 for all venereal diseases, and oach for the three diseases, except syphilis, the curves being clearly unimodal. In the case of males, however, the curve is less regular, but it seems to be evident that the ages of highost incidence of gonorrhea are 19-21, of syphilis 19-24, and of chancroid $20-24$. For somo reason the curve for males is in each instance not definitely unimodal, and in the case of syphilis is definitely bimodal.


1：14\％：



| Reportedayeat onset． | Mune． |  | Female． |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | lutiaras． | 14 can－ fonment zonts． | Indiara． |
| Under 15．．． | 3 | 4 | 19 | 18 |
| 15. | （1） | 21 | ［13 | 161 |
| 16. | $\therefore$ | 7 | 191 | 212 |
| 17. | 2，i | 151 | 47 | 317 |
| 18. | － | 27 | （ $1(3)$ | 377 |
| 19. | $\cdots 1$ | ＋ | （6it） | 468 |
| 20. | ［i．14 | Br | 3 s 2 | 334 |
| 21. | f1： | ザい | 319 | 327 |
| 22. | in： | ：3！ | 317 | 310 |
| 23. | risis | ： | 1：4 | 24 |
| 24. | ：11．； | 3is | 129 | 334 |
| 25－29．．． | $\because 1$ | 29 | 165 | 174 |
| 30－34．．． | 1，is | 1湤 | 65 | 110 |
| 3i－39． | $\therefore$ | 11.3 | 45 | 91 |
| 40－44． | 4 | til | 30 | 45 |
| 45 and over．． | $\because$ | 21 | 20 | 15 |

[^2]A comparison of the relative rariations in ago incidence of venereal disenses among pervomis of either sex as found for Indiana with those found for 10 cantomment zones reveals a striking similarity. ${ }^{3}$ For fomales the peaks of tho two curves occur in the same year, at the age of 19. In the case of mates the ascending limbs are quite similar and both reach a pak at the are of 19: in the 10 cantonment zones, however, the curve is definitely bimodal, and a second peak occurs at the age of 23. The suggestion is afforded that the incidence of


Figure 3.
venereal diseases was confined in Indiana to a younger group of males than in the 10 cantonment zones.

The age curves of venereal disease incidence are compared for married and single persons in Table V and Figure 4. In making this comparison it is important to bear in mind that the incidence presumably is at the age at which infection occurred, while marital condition is that at the age when the existence of the infection was reported.

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: Pierce, C. C., and Sydenstricker, Edgar: Loc, cit.


Figure 4.
Table V.-Relative variationa in the ineidence of venercal diseases according to age among white persons of both sexes and different martal conditions in Indiana.

SINGLE.

| Reportedageatonset. | Allventerealdisatas. |  | Gonorrhea. |  | Syphilis. |  | Chancroid. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Female, | MaIe. | Female. | Mate. | Female. | Male. | Female. |
| 15-19. | 60 | 121 | 70 | 143 | 42 | 1.00 | 34 | 108 |
| 20.24 | 141 | 117 | 148 | 106 | 126 | 129 | 105 | 71 |
| $25-34$ | 142 | 71 | 129 | 39 | 166 | 102 | 175 | 156 |
| 35-44.................- | 104 | 57 | 77 | 36 | 165 | 76 | 112 | 119 |
| 45 and over . | 38 | 11. | 24 |  | 69 | 23 | 31 | .......... |

MARRTED.

| 15-19. | 1,850 | 697 | 1,774 | 863 | 2,037 | 615 |  | 158 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20-24. | 377 | 278 | 394 | 305 | 356 | 277 | 377 | 89 |
| 25-34 | 114 | 117 | 175 | 121 | 150 | 111 | 140 | 176 |
| 35-44. | 83 | 51 | 74 | 32 | 94 | 61 | 108 |  |
| 45 and over. | 24 | 15 | 21 | 47 | 27 | 20 | 34 |  |

a The relative numbers in the table are a series of ratios obtained by dividing the percentage of total cases at each age liy the percentage of the total population at the corresponding age, for each sex and marital group. The population distribution used was that of 1910 .

The curves are quite dissimilar for males who have married and for those who have remained single. For males married at the time of report the incidence in the age period $15-19$ was nearly 5 times as high as in the age period 20-24, and over 10 times as high as in later age periods. In sharp contrast to this is the curve for males remaining single. Here the incidence in the age period $20-34$ is over twice that in the age period $15-19$, and remains relatively high in the period 35-44. This contrast tends to confirm the frequent observation that marriage greatly reduces venereal infections among males. In fact, if the proportion of males at each age period who were single, according to the 1910 census for Indiana, be compared with the variations in venereal discase incidence among males, a rather high degree of correlation is indicated ( $\mathbf{r}=0.85 \pm 0.19$ ). In the case of females the curves tend to be more similar, but in interpreting them two considerations should be regarded as possible: (1) That infectious among single females occur chiefly among that class described as prostitutes (commercial and clandestime); and (2) that infections among married females occur chiefly after marraige. If the age curves for married males be compared with that for married females, the curve for females tends to lag behind that for males, suggesting that the age at onset occurs among married females even later than in the case of males of the same group. When this indication is taken into consideration with the fact that females marry at younger ages than males, the contrast between premarital infection in the case of males and post-marital infection in the case of females is further emphasized. The relatively high-very high-incidence among women of younger ages, presumably soon after marriage, is an outstanding indication.

## Summary.

1. For the purpose of throwing some light upon the question of the age incidence of vencreal infections, and in the absence of complete data for any definitely and accurately observed population group, certain tabulations were made of approximately 8,400 case reports of venereal diseases among white persons in Indiana.
2. Considering these cases as fair samples of the total cases of that type which actually exist in the population under consideration, indices of venereal disease incidence according to age of onset were computed for persons of both sexes and of different marital condition by adjusting the age distribution of cases to that for the population of Indiana in 1910.
3. While the data can not be considered conclusive, they suggest the following points:
(a) The greatest incidence of venereal infections occurs in early adult ages, between 17 and 25 . This is true of both males and females.
(b) The incidence of venereal infections is earlier among females than males. The modal or peak age for females is 19 years, while that for males is approximately 21 years.
(c) While the data are not definite on this point, the evidence suggests that among persons married at the time of report, venereal infections were largely premarital in the case of males and postmarital in the case of females.
(d) There is a wide divergence in the incidence curves for males who were married previous to the time of report and for males who had remained single. In the one case, infections were confined chicfly to tho younger adult, ages (under 20); in the other, the incidence in the adult ages (20-24) was considerably higher than in the younger ages. The effect of marriage apparently was to greatly lessen the incidence of venereal infection among males.
(e) Gonorrhea apparently occurs at slightly younger ages than syphilis or chancroid among both males and females.
4. In view of the limitations of the data with respect to the number of cases reported, the stage at which disease was reported, the possible errors in determining accurately the age at which infection occurred, and the use of the 1910 age distribution of population, these observations can not, of course, be regarded as definitely conclusive.

## Appendix.

Table A.-Number of rases of venereal diseases reported to Indiana State Health Department among white persons during the period Jan. 1, 1918, to Mar. 1, 1920, by single years of age, and by sex and marital condition.


Table A．－Number of cases of venereal diseases reported to Indiana State Health Depart－ ment among white persons during the period Jan．1，1918，to Mar．1，1920，by single years of age，and by sex and marital condition－Continued．

| $\begin{gathered} \text { Age by single } \\ \text { years. } \end{gathered}$ | Total． |  |  |  |  | Male． |  |  |  |  | Female． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { 㗊 } \\ & \text { 品 } \end{aligned}$ | 害 |  |  | $\begin{aligned} & \text { 淢 } \\ & \text { H } \end{aligned}$ | $\begin{aligned} & \text { 皆 } \\ & \text { 音 } \end{aligned}$ | $\begin{aligned} & \text { 要 } \\ & \text { H } \\ & \text { Hen } \end{aligned}$ |  |  |  |  | $\begin{aligned} & \text { 苞 } \\ & \text { 雼 } \end{aligned}$ |  |
| 20. | ${ }^{556}$ | 403 | 127 | 11 | 15 | 426 | 352 | 57 |  | 13. | 130 | 51 | 70 | 2 |
| 21. | 605 | 451 | 330 | 9 | 1.5 | 489 | 406 | 69 |  |  | 116 | 45 | 61 | 4 |
| 23 | ${ }_{452}$ | ${ }_{293}$ | 129 | 18 | 12 | ${ }_{363}^{188}$ | 274 | 77 |  |  | ${ }_{89}$ | 33 19 | 52 | 14 |
| 24 | 483 | 293 | 156 | 20 | 14 | 367 | 262 | 90 |  |  | 116 | 31 | 66 | 163 |
| 25. | 359 | 222 | 117 | 11 | 9 | 296 | 211 | 70 |  |  | 63 | 11 | 47 | 41 |
|  | 380 | 193 | 145 | 11 | 11 | 294 | 185 | 94 | 6 | 9 | 68 | 8 | 51 | 5.2 |
|  | 300 | 1.1 | 125 | 10 |  | 240 | 151 | 81 | 4 |  | 60 | 10 | 44 |  |
| 28 | 283 | 138 | 130 | 8 |  | 219 | 124 | 86 | 5 |  | $6_{4}^{64}$ | 14 | 4 | 3.3 |
| 29. | 213 | 116 | 87 | 7 |  | 180 | 107 | 65 | 5 |  | 33 | 9 | 22 | 2．．．． |
| 30. | 224 | 102 | 106 | 7 | 9 | 179 | 97 | 69 | ${ }_{5}^{5}$ |  | 45 | 5 | 37 | 21 |
|  | 1 |  |  | － |  | 13. | \％ |  | 3 |  |  | 4 | 1 | ${ }_{3} \cdots$ |
| 33 | 138 | $6{ }_{6}$ | 67 | 4 |  | 108 | 58 | 44 | 1 |  | 30 | 4 | 23 |  |
|  | 1.15 | 65 | 76 | 5 | 3 | 12. | 52 | 58 |  |  | 26 | 3 | 20 | 2 i |
| 35. | 171 | 618 | 02 | 5 | 5 | 1.38 | 68 | 63 | ${ }_{4}$ | 3 | 33 |  | 29 | 1.2 |
|  | 137 | 53 | 66 | ${ }^{6}$ |  | 302 | 53 | 42 |  | 6 | 35 | 7 | 24 |  |
| 37 | 139 | 40 | 44 |  |  | ${ }^{85}$ | ${ }_{48}^{38}$ | 39 54 | 3 | 5 | $\stackrel{11}{29}$ | ${ }_{6}^{2}$ | $\stackrel{5}{2}$ | ${ }_{2}{ }^{2}$ |
|  | 189 | 27 | 35 | ${ }^{4}$ |  | 58 | 29 | 25 |  |  | 13 | 2 | 10 | $1 \ldots$ |
| 40. | 94 | 30 | 50 | 4 |  | 78 | 38 | 40 |  |  | 16 | 3 | 10 | 21 |
| 4 | 4.4 | $1{ }_{15}^{15}$ | 4 | 3 |  | ${ }_{48}^{48}$ | 14 | 28 | ， |  | 16 |  | 13 | 2 $\ldots$ ．．．． |
| 43. | 52 | 21 | 27 | 3 |  | 45 | 27 | 22 | ， |  | 7 | I |  | 1．．．． |
| 44. | 37 | 13 | 22 |  |  | 31 | 11 | 15 |  |  | 6 | 2 |  | ．．． |
| 45. | 47 | 18 | 25 | 6 |  | 39. | 14 | 22 |  |  | 8 | 2 |  | 3. |
| 46 |  | ${ }^{6}$ | 21 | 1 |  | 26 |  | 16 |  |  | 8 |  |  |  |
|  | 3.5 | ${ }_{7} 7$ | 2， | $\stackrel{1}{2}$ |  | ${ }_{28}^{24}$ | 7 | 19 | $\cdots$ |  |  |  |  | ${ }^{\text {］}}$ |
|  | 16 | 3 | 11 |  |  | 15 | 3 | 1. |  |  |  |  |  | 1. |
| 20. | 35 | 12 | 20 |  |  | 32. | 12 | 19 |  |  | 3 |  |  | 11 |
| 51 | 19 | 9 | 16 | ．${ }^{\text {i }}$ | $\cdot$ | 19 | $\frac{8}{6}$ | ¢ |  |  |  |  | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | ．．．．$\cdot$ ．．． |
| 53. | 14 | 1 | 13 |  |  | 10 |  | 10 |  |  |  | 1 | 3 | ……． |
| 54. | 14 | 4 | 9 |  | 1 | 9 | 3 |  |  |  | 5 | 1 |  | ．．．．．．．．． |
| 55. | 11 | 3 | 7 | ．．．． | 1 |  | 3 |  |  |  |  |  |  | －．．． 1 |
| 56 | 14 | 6 |  |  |  | 11 | 6 | 5 |  |  |  |  |  |  |
|  | 12 | 2 | 9 | 1 |  | 10 | 2 | 7 |  |  | 2 |  |  |  |
|  | 5 | 1 | 3 |  | － | 4 | 1 | 2 |  |  |  |  |  | ．．．．．．．． |
| 60. | 10 | 4 | 6 |  |  | 6 | 4 | 2 |  | ．－－ |  |  |  |  |
|  |  | ？ | 2 |  | $\cdots$ | ${ }_{4}^{5}$ |  | 1 |  |  | 1 |  |  |  |
| 63. | 9 | 3 | 4 |  | i | 9 | $\begin{aligned} & 3 \\ & 31 \end{aligned}$ | 4 | 1 | 1 |  |  |  |  |
| 64. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15. |  |  | 3 |  | ．． |  |  | 3 |  |  |  |  |  |  |
| $6_{66 . . . . . . . . . . . . . . . ~}^{1}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 67．．．．．．．．．．．．．．${ }_{1}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 70. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{1}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\frac{69}{76}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 78. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 80. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | ．．．． | －．．． |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | － |

Table B.-Number of cases of gonorthea reported to Indiana State Healih Department among uhile persons during the peried Jan. 1, 1918, to Mar. 1, 1920, by single years of age and by sex and marital condition.


Table B．－Number of cases of gonorrhea reported to Indiana State Health Department among white persons during the period Jan．1，1918，to Mar．1，1920，by single years of age，and by sex ard marital condition－Continued．

| Ago by single years． | Total． |  |  |  | Mate． |  |  |  |  | Female． |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \stackrel{\rightharpoonup}{8} \\ & \stackrel{\rightharpoonup}{0} \\ & \text { R } \end{aligned}$ | 害 | 亭 |  |  |  |  |  |  | $\begin{aligned} & \text { B } \\ & \text { B } \end{aligned}$ |  | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \text { 苛 } \\ & \text { 感 } \end{aligned}$ |  |  |
| 60．．．．．．．．．．．． |  |  |  |  | 1 | 3 | ］ |  |  |  |  |  |  |  |
|  | ， |  |  | ${ }^{-1} 2 \cdot$. |  | 1 |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 2 |  | 1 |  |  |  |  |  |  |  |
|  |  |  |  |  | 2 |  | 2 |  |  |  |  |  |  |  |
|  |  |  |  |  | I |  |  |  |  |  |  |  |  |  |
| 67. |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| 69. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70. |  |  |  |  | 1 |  |  |  | ． |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $7_{73}^{73}$ |  |  |  |  |  |  |  |  |  |  |  |  |  | ．．．． |
| 74. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 1. | 1 |  |  |  |  |  |  |  | ．．．． |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 77．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $80 . .$. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Tabie C．－Number of cases of syphilis reported to Indiana State Mealth Department among white persons during the period Jan．1，1918，to Mar．1，1920，by single years of age，and by sex and marital condition．


Table C．－Number of cases of syphilis reported to Indiana State Health Department among white persons during the period Jan．1，1918，to Mar．1，1920，by single years of age，and by sex and marital condition－Continued．

| $\underset{\substack{\text { years．} \\ \text { Age by single }}}{ }$ years． | Total． |  |  |  | Male． |  |  |  | Fermale． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \stackrel{\rightharpoonup}{5} \\ \stackrel{\rightharpoonup}{\circ} \end{gathered}$ | $\begin{aligned} & \text { 总 } \\ & \text { 巻 } \\ & \text { B } \end{aligned}$ |  |  | $\begin{aligned} & \dot{\text { ज़ं }} \\ & \stackrel{\rightharpoonup}{\circ} \end{aligned}$ |  |  |  | $\begin{aligned} & \text { ت゙ } \\ & \stackrel{\text { ® }}{0} \end{aligned}$ | $\begin{aligned} & \text { 品 } \\ & \text { 品 } \end{aligned}$ | $\begin{aligned} & \text { 蒗 } \\ & \text { 忽 } \end{aligned}$ |  |
| 20. 220 22. 23 24. | 197 <br> 212 <br> 1774 <br> 161 <br> 214 <br> 18 | $\begin{array}{r}112 \\ 137 \\ 96 \\ 96 \\ 108 \\ \hline 1\end{array}$ | 74 67 67 66 66 86 | ［8 3 <br> 4 4 <br> 9 4 <br> 8 4 <br> 16 4 | 121 118 1150 115 136 | 84 109 80 76 91 | 32 32 28 21 31 41 41 | 3 2 <br> $\mathbf{i}$ 1 <br> 3 3 <br> 2 2 <br> 2 2 | 76 74 69 46 78 | $\begin{gathered} 28 \\ 28 \\ 16 \\ \hline 8 \\ 17 \end{gathered}$ | 42 39 44 34 45 | 5 1 <br> 4 3 <br> 8 1 <br> 6 1 <br> 14 2 |
| 25. | 141 | 73 | 60 | 53 | 102 | 67 | 29 | 3.3 | 39 | 6 | 31 |  |
| 26 | 140 | 69 | 65 | $2{ }^{4}$ | 100 | 63 | 35 | － 2 | 40 | $6$ | 30 | 2 |
|  | 134 | 61 | 62 | ${ }_{6}^{6} \quad 5$ | ${ }_{93}^{81}$ | 52 | ${ }_{35}$ | 3 | 4 | 9 | 27 | ${ }_{3}^{4} \cdots{ }_{2}$ |
| 29. | 88 | 41 | 40 | 3） 3 | 69 | 34 | 29. | 3 | 18 | 7 | 11 | ．．．． |
| 30. | 93 | 43 | ${ }_{4} 4$ | 3.3 | 68 | 39 | 24 | 23 | 25 |  | 20 |  |
|  | 72 | 32 | 33 | $4{ }^{4}$ | 54 | 29 | 21 | $1 \quad 3$ | 18 | ${ }_{8}^{4}$ | 12 | ． |
|  | 80 | ${ }^{29}$ | 47 | $7 \quad 3$ | 56 | 24 | 26 | $4{ }^{2}$ | 30 | 5 | 21 | 31 |
| 33. | 71 | ${ }_{35}^{35}$ | 32 | 2 3 | 52 | ${ }^{31}$ | 19 |  | 19 | ， | 13 | 2 |
| 34. | 76 | 33 | 37 | 3.3 | 60 | 32 | 25 | 12 | 16 | 1 | 12 | 2 l |
| 35. | 88 | ${ }_{31}^{29}$ | 48 | $\begin{array}{lll}3 & 2 \\ 3 & 1\end{array}$ | 57 56 | 28 | ${ }_{27}^{27}$ | 2. | 25 | $\frac{1}{3}$ | ${ }_{21}^{21}$ | 1 2 |
|  | 52 | 23 | 23 | 3  <br> 4 1 | ${ }_{47}^{56}$ | ${ }_{22}^{28}$ | 21 | $\cdots$ | ${ }^{27}$ | 3 1 1 | $\stackrel{21}{2}$ | ， |
| 38. | 60 | 19 | 49 | 1．．． | 41 | 16. | 24 |  | 19 |  | 16 |  |
| 39. | 42 | 15 | 22 | ${ }^{4}$ i | 30 | 13 | 13 | 3.1 | 12 | 2 |  | 1 ． |
| 40. | 48 | 18 | 27 | $\begin{array}{lll}2 & 1\end{array}$ | 35 | 15 | 20 | － | 13 | 3 | 7 | 21 |
| 41. | ${ }^{26}$ | 10 | 14 | $\begin{array}{lll}1 & 1 \\ 3 & 1\end{array}$ | ${ }_{27}^{21}$ | ${ }_{8}^{8}$ |  |  | 5 | 1 | 3 | 1 |
| ${ }_{43}^{42}$ | ${ }_{34}^{40}$ | 13 | 19 | 3 2 <br> 1 1 | 29 | 12 | $\stackrel{16}{15}$ | 1－1 | 1. | 1 | 15 | $2 \ldots$ |
| 44. | 21 | 10 | 10 | 1．．．． | 16 | 9 | 6 | 1．．．． | 5 | 1 |  |  |
| 45. | 22 | 8 | 10 | 4．．．． | 17 | 6 | 9 | $2 \ldots$ | ， | 2 |  | 2 |
| 46 | ${ }_{18}^{16}$ | ${ }^{3}$ | 11 | 121 | 11 | 3 | ， |  |  |  |  | ．．． 1 |
|  | 18 <br> 24 | $\stackrel{8}{5}$ | 16 | ． $\begin{array}{rl}2 & 1 \\ 2 & 1\end{array}$ | 11 17 | 5 | ${ }_{10}^{3}$ | －．．．a ${ }^{1} 1$ | 7 |  |  | 2 |
| 49. |  | 1 | 5 | 2．．．． | 7 | 1. | 5 | 1．．．． | 1 |  |  | ．－．． |
| 50. | 21 | 7 | 13 | $1 \ldots$ | 19 | 7 | 12 |  | 2 |  | 1 | 1 |
|  | ${ }^{9}$ | 5 |  |  | 7 | 5. | 2 |  | 2 |  |  |  |
|  | 15 <br> 10 | ${ }_{5}^{1}$ | 9 | 1. | 11 |  | 5 | 1. | ${ }_{4}^{4}$ |  | 4. |  |
| 54 | 6 | 1 | ， |  | 2 | 1 | 1 |  | ， |  | 3 |  |
| 55. | 9 | 2 | 6 | $\cdots$ | 6 | 2 |  |  |  |  | 2 | 1 |
|  | 10 | 4 | 6 | ．．． | 7 | 4 |  |  |  |  | 3 |  |
|  | 8 | ${ }_{1}^{2}$ | ${ }_{6}$ | 1 | 7 |  | ${ }_{4}$ | $1 . .$. | ${ }_{2}^{1}$ |  | 1 | ．．． |
|  |  |  | 2 | i | $\stackrel{5}{2}$ |  | 1 | ．．．． | 1 |  | $\frac{2}{1} \text {. }$ |  |
| 60. | 6 | 1 | 5 |  |  | 1 | ， |  |  |  |  |  |
|  | 5 | 2 | － | ．．． | 4 | 2 | 1 | 1 ．． | 1 |  | 1 |  |
| 62. | 1 |  |  |  | 1 |  |  |  |  |  |  |  |
|  | 3 | 1 i | 2 | $\ldots$ | 3 | 1 i： |  | 1 |  |  |  |  |
| 65. |  |  | 1. |  |  |  | 1 |  |  |  |  |  |
|  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| 68. |  |  | 2 | ．．．．．．． | 2 |  | 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 2 |  |  |  | 2 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 1 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 74. |  |  |  |  |  |  |  |  |  |  |  |  |
| 77. |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 78. |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 80. | 1 |  |  |  | 1 |  |  | － |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

Table D.-Number of cases of chancroid reported to Indiana State Health Department among white persons during the period Jan. 1, 1918, to Mar. 1, 1920, by single years of age, and by sex and marital condition.


Table D．－Number of cases of chancroid reported to Indiana State Health Department among white persons during the period Jan．1，1918，to Mor．1，1920，by single years of age，and by sex and marital condition－Continued．

|  | Total． |  |  |  | Male |  |  |  |  | Female． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age by single years． | $\begin{aligned} & \text { 玉゙ } \\ & \text { हib } \end{aligned}$ | $\begin{aligned} & \text { 券 } \\ & \text { 品 } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { 总 } \\ & \text { 脱 } \end{aligned}$ | $\begin{aligned} & \text { 品 } \\ & \text { ت } \\ & \text { a } \end{aligned}$ |  |  |  |  |  |  |
| 60．．．．．．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 61. |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 1 | 1 |  |  |  |  |  |  | $\cdots$ |
| $68 . .$. |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 69．．．．．．．．．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | ．．．． |  |  |  |  |  |
| 72. |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 74．．．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 77．．．．．．．．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 79．．．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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[^0]:    ${ }^{1}$ From the Statistical Office, United States Public Bealth Service. Prepared in cooperation with the Division of Venereal Diseases, United States Public Health Service. Acknowledgments are made to the State Board of Health of Indiana for the use of the case reports. Reprint from the Public Health Reports, vol. 35, No. 52, Dec. 24, 1920, pp. 3091-3107.
    ${ }^{2}$ Pierce, C. C., and Sydenstricker, Edgar, Some Possibilities in the Statistical Analysis of Case Reports of Venereal Diseases: Public Health Reports, Aug. 27, 1920. (35: 2046-2055.)

[^1]:    a The relative numbers in this table are a series of ratios oltahed hy dividing tho percentare of total cases at each age by the peremtago of the total popalation at the curresionding ase. The population used was that of 1910 .

[^2]:    
    
    
    

