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EPIDEMIOLOGICAL SURVEILLANCE OF RABIES IN THE AMERICAS

1993



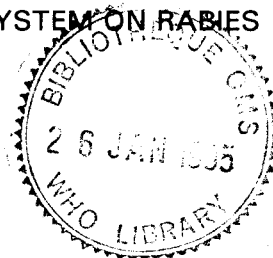
PAN AMERICAN HEALTH ORGANIZATION

VETERINARY PUBLIC HEALTH PROGRAM

PAN AMERICAN INSTITUTE OF FOOD PROTECTION AND ZOOZOSIS

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I. RABIES IN MAN

Mortality in the Americas by countries

The Pan American Institute of Food Protection and Zoonoses (INPPAZ) has received reliable information on the occurrence of 217 cases of human rabies in the American continent during 1993. This figure, which is only seven (7) cases below the 1992 total, shows that changes at the regional level in the mortality due specifically to this disease were not significant (Table 1).

The highest diagnostic incidence continued to be observed in the Andean subregion (41.0%), followed by Brazil (23.0%), Central American Isthmus (17.5%) and Mexico (13.4%). As in previous years, no human rabies victims were to be regretted in the Caribbean subregion (Fig. 1, Table 1).

With respect to the countries, cases of human rabies were reported in fifteen (15) of them. This figure, although similar to that of the preceding year, differs in its composition, since it includes deaths in Cuba, which were offset by the absence of cases in Honduras.

Also as compared with the previous year, the number of deaths caused by rabies diminished in Bolivia, Brazil, Colombia, Ecuador, El Salvador, Honduras, Mexico and Nicaragua. In absolute figures, the decrease was most evident in Bolivia, Brazil and El Salvador, in that order. Special mention should be made of Mexico, where rabies cases in humans have been on the decline for four consecutive years.

Rabies cases increased in six (6) countries: Cuba, Guatemala, Haiti, Peru, Venezuela, and the United States of America, with the highest increase in absolute figures in Guatemala and Peru.

The risk of dying of rabies as expressed by the specific mortality rate, which at the regional level is estimated at 0.03 per 100,000 inhabitants, is almost ten times higher in El Salvador, nine times higher in Peru, seven in Bolivia and six in Guatemala.

**FIGURE 1:
Percentage distribution of rabies cases in humans
by subregions of the Americas. 1993**

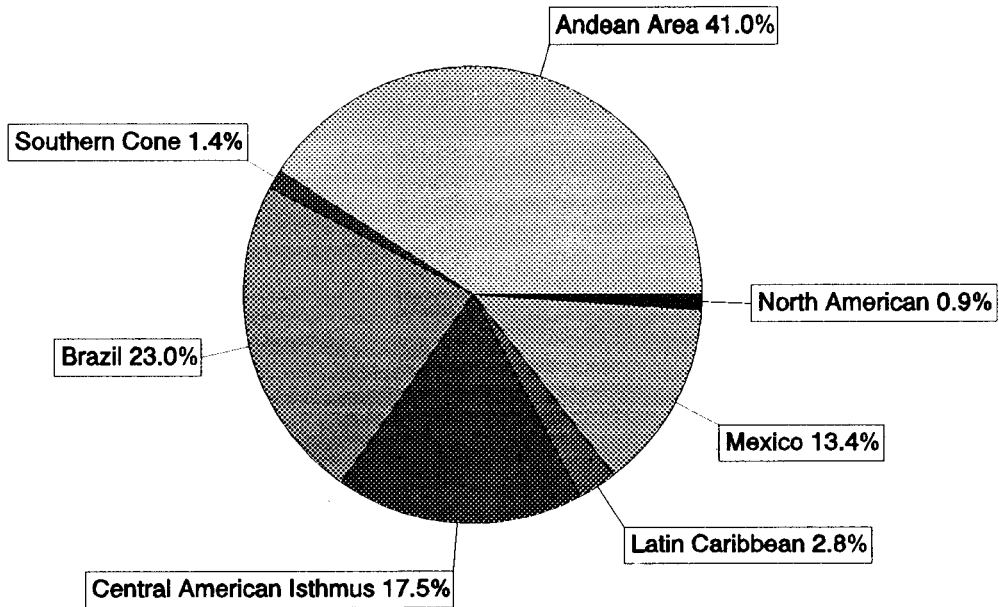


TABLE 1
Distribution of rabies cases in humans by
subregion and by countries of the Americas
1987 - 1993

Subregion/ country ^{1, 2}	N° of cases ³							Mortality rate per 10 ⁵ inhab. (1993)
	1987	1988	1989	1990	1991	1992	1993	
LATIN AMERICA	192	223	268	234	210	223	215	0.05
<u>Andean Area</u>	51	65	130	96	73	92	89	0.09
- Bolivia	16	17	11	8	11	25	16	0.20
- Colombia	10	14	15	12	5	8	5	0.01
- Ecuador	8	13	24	12	20	36	32	0.26
- Peru	14	20	79	63	35	22	34	0.01
- Venezuela	3	1	1	1	2	1	2	0.00
<u>Southern Cone</u>	5	3	0	2	5	3	3	0.00
- Paraguay	5	3	0	2	5	3	3	0.06
<u>Brazil</u>	37	37	50	54	70	56	50	0.03
<u>Central Amer. Isth.</u>	35	41	22	10	8	34	38	0.12
- Belize	0	2	3	0	0	0	0	0.00
- El Salvador	15	26	1	3	7	22	17	0.30
- Guatemala	12	11	13	4	1	5	19	0.19
- Honduras	4	1	4	2	0	4	0	0.00
- Nicaragua	4	1	1	1	0	3	2	0.04
<u>Mexico</u>	60	72	65	69	49	34	29	0.03
<u>Latin Caribbean</u>	4	5	1	3	5	4	6	0.02
- Cuba	0	0	0	1	1	0	1	0.00
- Haiti	1	2	1	1	3	3	4	0.05
- Dominican Republic	3	3	0	1	1	1	1	0.01
CARIBBEAN	0	0	0	0	0	0	0	0.00
NORTH AMERICA	1	0	1	1	3	1	2	0.00
- USA ⁴	1	0	1	1	3	1	2	0.00
TOTAL	193	223	269	235	213	224	217	0.03

¹ The subregions mentioned in the Table are those used in "Health Conditions in the Americas", Scientific Publication N° 524, PAHO/WHO.

² Includes only countries in which at least one case occurred in any one of the years reported.

³ Source: Monthly reports received at INPPAZ.

⁴ Source: Morbidity and Mortality Weekly Reports (MMWR), C.D.C.

According to procedures agreed upon, health authorities of the countries should send to INPPAZ a Monthly Report (IPZ-SIE-I), whether or not cases of rabies in man and/or animals occurred in their territory during that period. The monthly distribution of human cases by country and subregion is shown in Table 2.

TABLE 2
Rabies in man: Monthly distribution of cases reported
by the countries of the Americas, 1993

COUNTRIES BY SUBREGION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
LATIN AMERICA	27	25	18	11	22	14	18	14	17	20	17	12	215
<u>Andean Area</u>	12	15	9	6	7	8	6	4	5	4	7	6	89
Bolivia	2	3	1	1	2	0	1	0	1	1	3	1	16
Colombia	0	0	1	0	1	1	0	0	1	1	0	0	5
Ecuador	8	6	0	2	2	3	2	3	2	0	2	2	32
Peru	2	6	7	3	2	4	3	1	0	2	2	2	34
Venezuela	0	0	0	0	0	0	0	0	1	0	0	1	2
<u>South. Cone</u>	0	0	1	0	0	0	0	0	1	1	0	0	3
Paraguay	0	0	1	0	0	0	0	0	1	1	0	0	3
<u>Brazil</u>	6	5	4	2	9	1	5	1	4	8	3	2	50
<u>Central American Isth.</u>	4	2	2	3	3	3	5	6	3	3	4	0	38
El Salvador	2	0	1	2	0	2	4	4	1	1	0	0	17
Guatemala	2	2	1	1	3	0	1	1	2	2	4	0	19
Nicaragua	0	0	0	0	0	1	0	1	0	0	0	0	2
<u>Mexico</u>	5	1	1	0	3	2	1	2	4	4	3	3	29
<u>Latin Caribbean</u>	0	2	1	0	0	0	1	1	0	0	0	1	6
Cuba	0	1	0	0	0	0	0	0	0	0	0	0	1
Haiti	0	1	1	0	0	0	1	1	0	0	0	0	4
Dominican Rep.	0	0	0	0	0	0	0	0	0	0	0	1	1
NORTH AMERICA	0		0	0	0	1	0	0	0	0	1	0	2
U.S.A.	0		0	0	0	1	0	0	0	0	1	0	2
TOTAL	27	25	18	11	22	15	18	14	17	20	18	12	217

Note: The countries which explicitly informed that no cases of rabies in man had been reported in 1993 were: Argentina, Belize, Canada, Costa Rica, Chile, Grenada, Guyana, Honduras, Panama, Suriname, Trinidad and Tobago, and Uruguay.

(1) Source: MMWR

For each human case, a "Clinical Card" (IPZ-SIR-II) containing background information on the exposure should be prepared and sent to INPPAZ. Table 3 shows that INPPAZ received clinical cards for 199 of the cases (91.7%), a higher percentage than in the previous year, indicating that compliance with the procedures established to this effect was excellent.

TABLE 3
Distribution by country of rabies cases in humans,
reported and with "clinical card", 1993

Country	Cases reported		Country	Cases reported	
	Total	With Clin. Cd ¹		Total	With Clin. Cd
Bolivia	16	16	Mexico	29	28
Brazil	50	42	Nicaragua	2	2
Colombia	5	5	Paraguay	3	3
Cuba	1	0	Peru	34	34
Ecuador	32	31	Domin.Rep.	1	1
El Salvador	17	14	Venezuela	2	1
U.S.A.	2	0			
Guatemala	19	18	Total	217	199
Haiti	4	4			

¹ With clinical card

Three out of every four cases reported was classified as urban and in almost 80% the diagnosis was confirmed by laboratory techniques, mainly immunofluorescence (Table 4).

TABLE 4
Classification of 153 cases of rabies in humans by place of
residence and laboratory confirmation of diagnosis
Latin America, 1993

	DIAGNOSIS			
		Laboratory confirmation	No laboratory confirmation	Total
Residence	Urban	95	17	112
	Rural	27	14	41
	Total	122	31	153

Distribution of rabies cases in humans by sex and age

As in previous years, most deaths occurred in males (68.8%). As regards age, the 6 to 10 year-old group both in males and females showed the highest number of cases (Tables 5 and 6).

TABLE 5
Rabies in humans: distribution of 206 cases
by sex and by countries of the Americas, 1993

COUNTRY	Sex		Total	Percentage in Males
	Males	Females		
Bolivia	11	5	16	68.7
Brazil	30	11	41	73.2
Colombia	4	1	5	80.0
Ecuador	22	9	31	70.9
El Salvador	8	6	14	57.1
U.S.A.	0	1	1	0.0
Guatemala	14	4	18	77.7
Haiti	2	2	4	50.0
Mexico	19	9	28	67.8
Nicaragua	0	2	2	0.0
Paraguay	3	0	3	100.0
Peru	21	13	34	61.7
Dominican Rep.	1	0	1	100.0
Venezuela	1	0	1	100.0
Total	136	63	199	68.0

TABLE 6
Rabies in humans: distribution of 198 cases
by sex and age, the Americas, 1993

Age groups (years)	Sex		Frequency by age		
	Males	Females	Total	Relative	Cumulative
< 5	19	13	32	16.2	16.2
6 - 10	35	23	58	29.3	45.5
11 - 20	31	10	41	20.1	65.6
21 - 30	12	1	13	6.6	72.2
31 - 40	16	3	19	9.6	81.8
41 - 50	9	4	13	6.6	88.4
51 - 60	6	6	12	6.1	94.5
61 or over	7	3	10	5.5	100.0
Total	135	63	198	100.0	-----

Sources of Infection

In 172 of the total cases reported information was provided on the source of infection. Once again, the dog was the animal species most frequently involved (83.7%). Bats were responsible in 17 cases (8.9%) and cats in 6 (3.1%). Other incriminated animals were monkeys and foxes (two cases each) and raccoons (*Procyon lotor*) (one case). Of the two cases in humans in the United States during 1993, information on the source of infection was obtained in only one instance; an insectivorous bat (*Lasionycteris noctivagans*) was considered to be the most probable responsible species (Table 7).

TABLE 7
Rabies in humans: Distribution of 172 cases according to the animal species identified as source of infection and by countries of the Americas, 1993

Country	Cases by source of infection (N°)					
	Dogs	Bats	Cats	Others	Total	
Bolivia	15	1	0	0	16	
Brazil	30	5	3	2	40	
Colombia	4	0	0	0	4	
Ecuador	20	0	1	0	21	
El Salvador	12	1	1	0	14	
U.S.A.	0	1	0	0	1	
Guatemala	12	0	0	0	12	
Haiti	2	0	0	0	2	
Mexico	18	7	1	2	28	
Nicaragua	2	0	0	0	2	
Paraguay	2	0	0	1	3	
Peru	25	2	0	0	27	
Dominican Rep.	1	0	0	0	1	
Venezuela	1	0	0	0	1	
Total	N°	144	17	6	5	172
	%	83.7	9.9	3.5	2.9	100.0

Site of the viral inoculation (entry of virus)

The 199 clinical cards received in 1993 provided some information on how the persons who had died of rabies had been exposed to the disease. In 155 cases, (80.3%), penetration of the virus had occurred through animal bites, but only 139 cards indicated the place where the biting took place. The distribution of the biting sites is presented in Table 8. The total of 147 results from the fact that eight victims were bitten twice and 131 once only.

The most frequently affected parts of the body were the upper limbs (48.3%) and the lower limbs (32.0%), practically in all age groups.

TABLE 8
Distribution by age of the location of 147 bites
in persons who died of rabies, 1993

Age group (years)	Location of bite				Total bites
	Head or neck	Trunk	Upper limbs	Lower limbs	
< 5	8	1	10	7	26
5 - 10	11	1	15	14	41
11 - 20	3	0	18	10	31
21 - 30	1	1	4	4	10
31 - 40	0	0	11	3	14
41 - 50	2	0	5	4	11
51 - 60	0	0	4	3	7
61 or over	1	0	4	2	7
Total	23	3	63	47	147
Relative frequency	17.7	2.0	48.3	32.0	100.0

Periods of Incubation and state

The mean in days of the incubation period was 35 and of the period of state, 5 days. The range for the first variable was 3 to 454 days and for the second, 1 to 117. The upper limits for both periods surpassed considerably those reported in previous years (Table 9).

TABLE 9
Periods of incubation and state¹ in rabies cases in
humans observed during 1993 (duration in days)

Variable	Values in days	
	Incubation period	Period of state
Mean (days)	35	5
Lower limit (days)	3	1
Percentile "10" (days)	16	2
Percentile "90" (days)	87	12
Upper limit (days)	454	117

¹ Observations during the incubation period numbered 111 and during the period of state, 180.

The analysis of such data, assuming that they are correct, indicates that in a vast majority of the treatments the prescribed procedures were not followed.

Thus, for instance, in cases 1, 2, 5, 6, 7, 8, 10, 16, 17, 18, 19, 20, 21, 23, 25, 26, 27, 28, and 29 the treatment was not timely, since it was initiated several days after exposure and, in some, even after the appearance of symptoms.

In case 3, the injury was in the head and therefore required treatment with serum, which apparently was not administered. It may be assumed that the same happened in cases 8, 12, 14, 16, 17, 18, 22, 25, 26, and 30, in all of which, because of the location of the bite and/or because there were multiple injuries, initial treatment with serum was the advisable measure.

In cases 3, 8, 11, 12, 13, 15, 17, 18, 22, 24, and 27 treatment seems to have been incomplete; in case 4, the information available is insufficient to warrant an opinion on the "quality" of the treatment provided. Lastly, case 9 could have been a therapeutic failure, except if the injury had been on the fingertips and the administration of serum would have been advisable.

The fact that 85% of those who died had not received treatment and that when treatment was administered the standards and procedures recommended in each case were not followed, should be taken into account by the corresponding institutional and technical levels in order to adopt corrective measures, both technically appropriate and operatively feasible.

II.- RABIES IN ANIMALS

The data available at INPPAZ indicate that in 1993 cases of rabies in animals totalled no less than 19,953, a figure which is 7.2% above that for 1992. The highest relative increases in a subregion/area occurred in the Caribbean, the Central American Isthmus and the Andean Area, amounting to 1500.0, 75.0 and 24.0 per cent, respectively. Negative variations were found in Mexico (-29.9%) and the Latin Caribbean (-26.8%).

As regards North America, the 10,575 cases reported represent slightly more than half the cases of rabies in animals notified in the Region (53.0%), and surpass by 3.9% those of the previous year (Table 11).

Cases of rabies in animals are reported weekly in the "Morbidity and Mortality Weekly Report: MMWR" published by the U.S.A. Public Health Service. In 1993 such cases amounted to 8,555, or 711 more (9.1%) than the corresponding figure for 1992. Since in this publication the affected animal species is not specified, those cases have not been included in the tables that follow, although they represent 42.9% of total cases in animals reported by the region as a whole during the period.

TABLE 11
Cases of rabies in animals in the Americas
Total and by subregions, 1992 - 1993

Subregions/ Areas	Cases reported			
	1992	1993	Difference	
	N°	N°	N°	%
Latin America	8.430	9.362	932	11.1
* Andean Area	2.980	3.694	714	24.0
* Southern Cone	497	576	79	13.7
* Brazil	1.978	2.294	316	15.9
* Centr. American Isth.	671	1.174	503	75.0
* Mexico	2.006	1.406	-600	-29.9
* Latin Caribbean	298	218	-80	-26.8
Caribbean	1	16	15	1.500.0
North America	10.176	10.575	399	3.9
Total, Region	18.607	19.953	1.346	7.2

As indicated in Table 12, cases in "pet animals" (dogs and cats) totalled 6,889. This figure represents 60.4% of the total 11,399 cases of rabies in animals accounted for, excluding for the reasons already mentioned, those in the United States, which in a vast majority correspond to wild animals. Cases in "Domestic animals of economic interest (DAEI) (bovines, goats, equine, sheep, and swine) amounted to 2,686 (23.6%), while those diagnosed in wild animals totalled 1,824 (16.0%).

The percentage distribution of rabies cases according to the "category" of the animals involved varies from one subregion to another. In Latin America, cases in pet animals are predominant (71.6%), whereas those in wildlife are the least frequent (3.7%). The situation is the reverse in Canada/North America, where cases in pets represent 9.2% of the total and those in wildlife, 73.2% (Figure 2). However, within Latin America the situation is not similar in all the subregions, although in some of them there is evidence of considerable underreporting by the countries, particularly as regards cases in DAEI and wildlife.

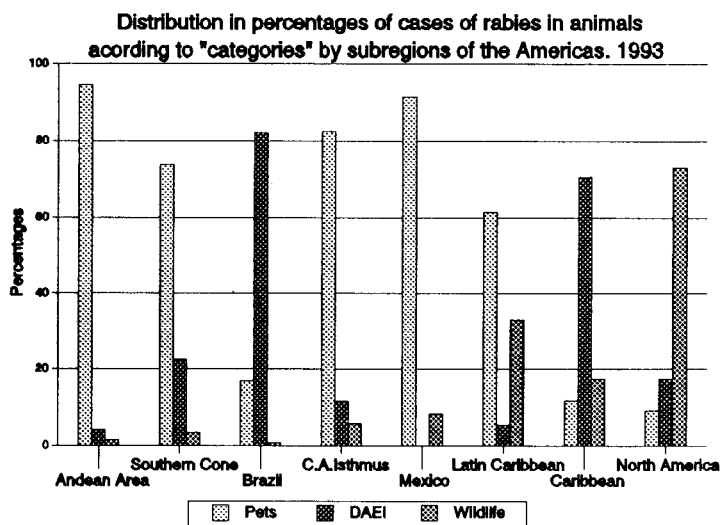
TABLE 12
Distribution of rabies cases in animals
by "categories". Total and by subregions, the Americas, 1993

Subregions/ Areas	Cases in animals						Total	
	Pets ¹		"DAEI" ²		Wildlife		N°	%
	N°	%	N°	%	N°	%		
Latin America	6700	71.6	2319	24.8	343	3.7	9362	100.0
* Andean Area	3492	94.5	153	4.1	49	1.3	3694	100.0
* Southern Cone	426	73.9	130	22.6	20	3.5	576	100.0
* Brazil	391	17.0	1886	82.2	17	0.7	2294	100.0
* Centr Amer Is. *	969	82.5	138	11.7	67	5.7	1174	100.0
Mexico	1288	91.6	0	0	118	8.4	1406	100.0
* Latin Caribb.	134	61.5	12	5.5	72	33.0	218	100.0
Caribbean	2	11.8	12	70.6	3	17.6	17	100.0
North America³	187	9.2	355	17.6	1478	73.2	2020	100.0
Total, Region	6889	60.4	2686	23.6	1824	16.0	11399	100.0

¹ Pets: Includes dogs and cats

² DAEI: Domestic animals of economic interest

³ The information on cases in North America refers only to Canada. In the U.S.A. 8,555 cases of animal rabies were reported during the year according to data from MMWR. Vol. 42/N^{os} 51 - 52, 26/12/92-01/01/93.



Rabies in dogs

Total cases reported in dogs - 6.359 - are 485 (8.3%) above those notified in 1992 and represent almost all cases diagnosed in "pet animals" in the region of the Americas (92.3%).

Eighteen countries, one more than in 1992, informed on the occurrence of rabies cases in dogs: Argentina, Bolivia, Brazil, Canada, Colombia, Cuba, Ecuador, El Salvador, Grenada, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Paraguay, Peru, Dominican Republic, and Venezuela.

Of the figures reported, practically half (51.0%), correspond to cases in countries of the Andean subregion, 18.9% to Mexico and 14.5% to the affected countries of the Central American Isthmus. The highest relative increment was observed in the subregion mentioned last (116.5%); within it, variation amounted to 28.7% in El Salvador, to 68.4% in Honduras, to 361.7% in Guatemala, and to 578.6% in Nicaragua.

The other countries where the number of cases of canine rabies also rose were: Colombia (145.3%), Peru (123.9%), Ecuador (54.6%), Argentina (31.9%), and Paraguay (20.9%), in addition to Grenada, where no cases in dogs were reported in 1992.

Seven countries had fewer cases of canine rabies than in the previous year: Brazil (-36.8%), Canada (-35.6%), Cuba (-25.7%), Mexico (-24.5%), Bolivia (-21.8%), Dominican Republic (-17.4%), and Venezuela (-3.6%). Haiti reported fifty cases, both in 1992 and 1993.

As in previous years, Belize, Costa Rica, Chile, Panama, Suriname, Trinidad and Tobago, and Uruguay informed INPPAZ that no cases of rabies in dogs had occurred in their territories. Probably the situation was the same in other countries, but no mention is made of them because they did not inform the fact formally to INPPAZ.

Eight out of ten cases reported were "confirmed" as positive by laboratory diagnosis. Since only part of the cases are detected and, of these, the conditions are seldom adequate for the collection of samples and the analysis at the laboratory, it seems advisable to recall that it has been agreed upon that cases diagnosed only on the basis of "clinical presumption" should also be reported.

Rabies in cats

Fifteen countries, three less than in 1992, notified a total of 530 cases of rabies in this animal species, 27.4% more than in 1992. Cases confirmed by laboratory diagnosis amounted to 317 (59.8%).

Ecuador was the country with the highest diagnostic incidence of rabies in cats in the whole region (27.6%), followed by Canada and Mexico, with 20.9% and 16.0%, respectively.

Argentina, Belize, Costa Rica, Chile, Haiti, Panama, Suriname, Trinidad and Tobago, and Uruguay informed INPPAZ that no cases of rabies in cats had occurred in their territories during 1993 (Table 14).

Rabies in bovines

Sixteen countries in the region informed INPPAZ on the occurrence of cases of bovine rabies in their territories in 1993. The total figure was 2,136, 13.1% more than in 1992. The country that reported the highest number was Brazil with 1,443, which represent slightly more than two thirds of the total, followed by Canada with 302, and Paraguay with 127 (Table 15).

Ten countries: Argentina, Belize, Chile, Guyana, Haiti, Mexico, Suriname, Trinidad and Tobago, Uruguay, and Venezuela informed on the absence of cases of rabies in bovines in the Monthly Reports prepared by their public health authorities. However, there is evidence that in several of them bovine deaths attributed to that cause did occur. For various reasons, including the lack or inadequacy of sectoral coordination, particularly with the animal health services, there is considerable underreporting. Such is the case in Argentina, Colombia, Mexico, and Venezuela.

TABLE 13
Rabies in dogs: Monthly distribution of cases
reported by the countries of the Americas, 1993

Countries by Subregion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
													A	B
LATIN AMERICA	434	621	622	564	511	558	475	578	608	555	469	385	6.281	4.881
<u>Andean Area</u>	273	409	388	238	284	225	223	282	230	197	219	183	3.241	2.251
Bolivia	122	127	110	100	127	99	79	126	59	57	90	73	1.169	344
Colombia	3	4	6	43	30	13	23	34	29	7	13	6	211	58
Ecuador	97	190	128	106	60	56	64	49	70	69	63	50	1.002	1.002
Peru	43	76	138	71	58	56	53	67	66	58	49	44	779	779
Venezuela	8	12	6	8	9	1	4	6	6	6	4	10	80	68
<u>Southern Cone</u>	21	14	24	24	17	49	59	49	49	42	40	30	418	418
Argentina	5	0	5	6	7	17	19	2	9	9	7	5	91	91
Paraguay	16	14	19	18	10	32	40	47	40	33	33	25	327	327
<u>Brazil</u>	14	33	28	27	20	77	29	37	34	21	39	S/i	359	338
<u>Central American Isth</u>	48	51	72	52	63	80	63	105	90	149	76	97	946	612
El Salvador	16	10	14	12	8	10	7	18	9	6	5	6	121	121
Guatemala	15	15	26	18	23	27	28	30	22	31	20	22	277	277
Honduras	11	23	27	19	23	30	19	45	49	101	43	63	453	122
Nicaragua	6	3	5	3	9	13	9	12	10	11	8	6	95	95
<u>Mexico</u>	71	103	100	116	115	116	98	97	97	134	86	69	1.203	1.203
<u>Latin Caribb.</u>	6	11	10	17	12	11	3	9	8	12	9	6	114	59
Cuba	1	1	5	4	3	3	0	1	2	2	2	2	26	26
Haiti	3	8	1	12	4	1	3	6	3	4	1	4	50	0
Dominican Rep.	2	2	4	1	5	7	0	2	3	6	6	0	38	33
CARIBBEAN	0	1	0	0	1	0	0	0	0	0	0	0	2	0
Grenada	0	1	0	0	1	0	0	0	0	0	0	0	2	0
NORTH AMERICA	9	14	7	6	9	6	4	3	4	3	7	4	76	76
Canada	9	14	7	6	9	6	4	3	4	3	7	4	76	76
TOTAL	443	636	636	576	521	570	483	682	702	559	476	389	6.359	4.957

- A: Total cases reported regardless of the type of diagnosis
B: Total cases reported with laboratory confirmation
Countries that reported not having cases of rabies in dogs in 1993: Belize, Costa Rica, Chile, Panama, Suriname, Trinidad and Tobago, and Uruguay
N/i: No information

TABLE 14
Rabies in cats: Monthly distribution of cases
reported by the countries of the Americas, 1993

Countries by Subregion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
													A	B
LATIN AMERICA	23	54	48	44	36	56	33	15	22	24	35	29	419	372
<u>Andean Area</u>	11	41	31	32	26	15	16	6	15	15	21	22	251	205
Bolivia	4	10	7	2	5	3	0	1	2	2	7	5	48	11
Colombia	0	0	0	6	2	1	2	0	0	0	1	1	13	4
Ecuador	5	27	13	22	12	9	11	4	9	12	10	12	146	146
Peru	2	4	10	2	7	2	3	1	4	1	3	3	42	42
Venezuela	0	0	1	0	0	0	0	0	0	0	0	1	2	2
<u>Southern Cone</u>	1	1	2	0	1	0	0	0	0	1	1	1	8	8
Paraguay	1	1	2	0	1	0	0	0	0	1	1	1	8	8
<u>Brazil</u>	5	0	6	5	1	5	1	3	1	1	4	S/i	32	32
<u>Central American Isth.</u>	0	2	3	0	3	3	4	0	1	2	3	2	23	23
El Salvador	0	0	0	0	1	1	1	0	0	1	1	2	7	7
Guatemala	0	1	1	0	2	1	0	0	0	1	1	0	7	7
Honduras	0	0	2	0	0	0	0	0	0	0	0	0	2	2
Nicaragua	0	1	0	0	0	1	3	0	1	0	1	0	7	7
<u>Mexico</u>	5	9	4	5	4	28	9	4	4	4	6	3	85	85
<u>Latin Caribbean</u>	1	1	2	2	1	5	3	2	1	1	0	1	20	19
Cuba	1	0	1	1	1	3	2	0	0	0	0	0	9	9
Dominican Rep.	0	1	1	1	0	2	1	2	1	1	0	1	11	10
NORTH AMERICA	5	10	6	4	5	8	7	15	15	19	9	8	111	111
Canada	5	10	6	4	5	8	7	15	15	19	9	8	111	111
TOTAL	28	64	54	48	41	64	40	30	36	43	44	37	530	483

A Total cases reported regardless of the type of diagnosis
 B Total cases reported with laboratory confirmation
 N/i No information

TABLE 15
Rabies in bovines: Monthly distribution of cases
reported by the countries of the Americas, 1993

Countries by Subregion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
													A	B
LATIN AMERICA	73	193	302	160	81	201	95	189	255	125	133	24	1.831	894
<u>Andean Area</u>	8	6	3	10	11	7	3	29	14	10	18	4	123	77
Bolivia	1	2	0	2	3	2	0	0	0	1	2	0	13	11
Colombia	1	1	0	5	5	2	2	25	9	5	11	0	66	22
Ecuador	5	2	2	0	2	1	1	3	3	2	3	4	28	28
Peru	1	1	1	3	1	2	0	1	2	2	2	0	16	16
<u>Southern Cone</u>	8	22	17	7	6	9	15	8	6	10	10	9	127	127
Paraguay	8	22	17	7	6	9	15	8	6	10	10	9	127	127
<u>Brazil</u>	48	154	271	132	59	173	61	138	221	91	95	S/i	1443	553
<u>Central American Isth</u>	9	9	9	11	5	12	16	14	14	14	10	9	132	132
Costa Rica	0	1	0	1	0	0	0	0	0	0	0	0	2	2
El Salvador	1	5	3	4	3	5	5	7	5	2	5	0	45	45
Guatemala	0	2	4	5	0	4	7	4	3	6	1	1	37	37
Honduras	0	0	0	0	0	0	1	0	0	2	0	1	4	4
Nicaragua	0	0	0	0	0	0	1	1	0	0	0	0	2	2
Panama	8	1	2	1	2	3	2	2	6	4	4	7	42	42
<u>Latin Caribb.</u>	0	2	2	0	0	0	0	0	0	0	0	2	6	5
Cuba	0	2	0	0	0	0	0	0	0	0	0	2	4	4
Dominican Rep	0	0	2	0	0	0	0	0	0	0	0	0	2	1
CARIBBEAN	0	0	1	0	0	1	0	1	0	0	0	0	3	0
Grenada	0	0	1	0	0	1	0	1	0	0	0	0	3	0
NORTH AMERICA	26	40	28	24	15	21	8	17	24	29	43	27	302	302
Canada	26	40	28	24	15	21	8	17	24	29	43	27	302	302
TOTAL	99	233	331	184	96	223	103	207	279	154	176	51	2.136	1.196

A Total cases reported regardless of the type of diagnosis
B Total cases reported with laboratory confirmation
S/i No information

Rabies in other domestic animals

Included in this group are cases of rabies in equine, sheep, goats, and swine. Cases totalled 550, 51.1% more than the amount reported in 1992.

The vast majority of the cases, (82.0%) occurred in equine, and of these, almost all were reported by Brazil. Only in one third of the cases was the diagnosis confirmed by laboratory tests (Table 16). The distribution by month and by the reporting countries is shown in Table 17.

TABLE 16
Cases of rabies in domestic species excluding
dogs, cats and bovines. Countries 1993

Countries	N° of cases by species				Total	
	Equine	Sheep	Goats	Swine	A	B
	LATIN AMERICA	436	13	17	22	488
<u>Andean Area</u>	3	6	4	17	30	30
Bolivia	0	1	0	2	3	3
Ecuador	0	2	0	8	10	10
Peru	3	3	4	7	17	17
<u>Southern Cone</u>	1	1	1	0	3	3
Paraguay	1	1	1	0	3	3
<u>Brazil</u>	430	4	9	0	443	88
<u>Central American Isth.</u>	1	0	3	2	6	6
El Salvador	0	0	1	1	2	2
Guatemala	0	0	1	1	2	2
Honduras	0	0	1	0	1	1
Panama	1	0	0	0	1	1
<u>Latin Caribbean</u>	1	2	0	3	6	5
Cuba	0	2	0	2	4	4
Dominican Republic	1	0	0	1	2	1
CARIBBEAN	0	8	1	0	9	0
Grenada	0	8	1	0	9	0
NORTH AMERICA	15	20	8	10	53	53
Canada	15	20	8	10	53	53
Total	451	41	26	32	550	185

A Total cases reported regardless of the type of diagnosis

B Total cases reported with laboratory confirmation

Countries that reported not having recorded cases in "other" domestic animals in 1993: Argentina, Belize, Chile, Colombia, Costa Rica, Guyana, Haiti, Mexico, Nicaragua, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

TABLE 17
Monthly distribution of cases of rabies in "other domestic animals"⁽¹⁾ reported by the countries of the Americas, 1993

Countries by Subregion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
													A	B
LATIN AMERICA	4	56	111	67	50	48	48	37	26	6	30	5	488	132
<u>Andean Area</u>	3	2	2	2	4	2	4	5	2	0	2	2	30	30
Bolivia	0	0	0	0	1	0	1	1	0	0	0	0	3	3
Ecuador	3	2	1	0	0	2	0	1	1	0	0	0	10	10
Peru	0	0	1	2	3	0	3	3	1	0	2	2	17	17
<u>Southern Cone</u>	0	1	0	0	1	0	0	0	0	0	0	1	3	3
Paraguay	0	1	0	0	1	0	0	0	0	0	0	1	3	3
<u>Brazil</u>	1	53	107	65	43	46	44	30	21	6	27	S/i	443	88
<u>Central American Isth.</u>	0	0	1	0	0	0	0	1	3	0	1	0	6	6
El Salvador	0	0	0	0	0	0	0	1	1	0	0	0	2	2
Guatemala	0	0	0	0	0	0	0	0	2	0	0	0	2	2
Honduras	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Panama	0	0	0	0	0	0	0	0	0	0	1	0	1	1
<u>Latin Caribb.</u>	0	0	1	0	2	0	0	1	0	0	0	2	6	5
Cuba	0	0	0	0	2	0	0	0	0	0	0	2	4	4
Dominican Rep	0	0	1	0	0	0	0	1	0	0	0	0	2	1
CARIBBEAN	2	0	0	2	1	0	2	0	2	0	0	0	9	0
Grenada	2	0	0	2	1	0	2	0	2	0	0	0	9	0
NORTH AMERICA	2	17	1	1	5	1	0	3	7	8	6	2	53	53
Canada	2	17	1	1	5	1	0	3	7	8	6	2	53	53
TOTAL	8	73	112	70	56	49	50	40	35	14	36	7	550	185

- ¹ Includes goats, equine, sheep, and swine.
A Total cases reported regardless of the type of diagnosis.
B Total cases reported with laboratory confirmation.
N/i No information.

Rabies in wildlife (Tables 18 and 19)

In 1993, cases reported in wildlife were 17.8% below those notified in 1992 (1,824 as compared with 2,220). Although the fact has been mentioned previously, it should be recalled that U.S.A. data are not included here. During that year, the U.S.A. made the diagnosis of 8,555 animal samples, most of them from wild animals. Four fifths of the cases included in Table 18 were reported by Canada (81.0%) and the rest, mostly by Mexico and Honduras.

TABLE 18
Wildlife: Distribution by species of rabies cases reported by the countries of the Americas, 1993

Country	BA	FX	SK	MO	MK	WF	COY	RC	OTHER	NS	TOTAL	
											A	B
LATIN AMERICA	143	16	0	72	8	0	0	0	35	69	343	223
<u>Andean Area</u>	13	4	0	0	6	0	0	0	24	2	49	13
Bolivia	0	0	0	0	2	0	0	0	0	1	3	1
Colombia	12	3	0	0	0	0	0	0	21	0	36	2
Ecuador	0	0	0	0	1	0	0	0	1	0	2	2
Peru	1	1	0	0	3	0	0	0	2	1	8	8
<u>Southern Cone</u>	16	0	0	0	2	0	0	0	1	1	20	20
Chile	16	0	0	0	1	0	0	0	0	0	17	17
Paraguay	0	0	0	0	1	0	0	0	1	1	3	3
<u>Brazil</u>	3	12	0	0	0	0	0	0	2	0	17	17
<u>Central American Isthm.</u>	0	0	0	0	0	0	0	0	1	66	67	1
El Salvador	0	0	0	0	0	0	0	0	1	0	1	1
Honduras	0	0	0	0	0	0	0	0	0	66	66	0
<u>Mexico</u>	111	0	0	0	0	0	0	0	7	0	118	118
<u>Latin Caribb.</u>	0	0	0	72	0	0	0	0	0	0	72	54
Cuba	0	0	0	32	0	0	0	0	0	0	32	32
Dominican Rep.	0	0	0	40	0	0	0	0	0	0	40	22
CARIBBEAN	0	0	0	3	0	0	0	0	0	0	3	0
Grenada	0	0	0	3	0	0	0	0	0	0	3	0
NORTH AMERICA	49	887	404	0	0	93	22	14	9	0	1478	1478
Canada	49	887	404	0	0	93	22	14	9	0	1478	1478
Total	192	903	404	75	8	93	22	14	44	69	1824	1701

A Total cases reported regardless of the type of diagnosis.

B Total cases reported with laboratory confirmation.

Countries which reported not having cases of rabies in wildlife in 1993: Argentina, Belize, Costa Rica, Guatemala, Haiti, Nicaragua, Panama, Suriname, Trinidad and Tobago, and Venezuela.

ABBREVIATIONS: BA = Bat (insectivorous and hematophagous), COY = Coyote, FX = Fox, MK = Monkey, MO = Mongoose, RC = Raccoon, SK = Skunk, WF = Wolf, NS = Not specified

At the regional level, the majority of rabies diagnoses involved foxes, although the situation is not the same in all countries. For example, in Canada the highest diagnostic incidence in wildlife was found in foxes and skunks, whereas in Cuba, Grenada and the Dominican Republic only the mongoose (*Herpestes ichneumon*) is mentioned as source of infection. In the rest of the Latin American countries rabies in wildlife is diagnosed most frequently in bats, both insectivorous and hematophagous, with the exception of Brazil, where rabies is also found in foxes.

TABLE 19
Wildlife: Monthly distribution of cases
reported by the countries of the Americas, 1993

Countries by Subregion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
													A	B
LATIN AMERICA	34	14	22	29	18	97	18	25	16	12	21	37	343	223
<u>Andean Area</u>	0	0	2	7	9	12	4	7	3	0	2	3	49	13
Bolivia	0	0	0	1	0	1	0	0	0	0	0	1	3	1
Colombia	0	0	0	6	7	10	3	5	3	0	2	0	36	2
Ecuador	0	0	0	0	0	1	0	0	0	0	0	1	2	2
Peru	0	0	2	0	2	0	1	2	0	0	0	1	8	8
<u>Southern Cone</u>	2	0	4	3	1	0	0	1	1	3	2	3	20	20
Chile	2	0	2	3	1	0	0	0	1	3	2	3	17	17
Paraguay	0	0	2	0	0	0	0	1	0	0	0	0	3	3
<u>Brazil</u>	1	2	1	0	0	1	2	7	3	0	0	0	17	17
<u>Central American Isth</u>	21	7	6	3	2	4	2	2	1	8	9	2	67	1
El Salvador	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Honduras	21	7	6	3	2	4	2	2	1	8	8	2	66	0
<u>Mexico</u>	2	0	0	10	1	76	2	7	2	0	3	15	118	118
<u>Latin Caribb.</u>	8	5	9	6	5	4	8	1	6	1	5	14	72	54
Cuba	2	0	7	1	1	2	2	1	3	0	2	11	32	32
Dominican Rep.	6	5	2	5	4	2	6	0	3	1	3	3	40	22
CARIBBEAN	0	0	0	0	2	1	0	0	0	0	0	0	3	0
Grenada	0	0	0	0	2	1	0	0	0	0	0	0	3	0
NORTH AMERICA	112	81	108	150	99	118	140	163	164	133	107	103	1478	1478
Canada	112	81	108	150	99	118	140	163	164	133	107	103	1478	1478
TOTAL	146	95	130	179	119	216	158	188	180	145	128	140	1824	1701

A: Total cases reported regardless of the type of diagnosis

B: Total cases reported with laboratory confirmation

III.- REGIONAL INFORMATION SYSTEM ON RABIES IN THE AMERICAS

Successive meetings of the Heads of National Rabies Programs have emphasized the desirability of giving support to an information system that would make possible the timely and continuous exchange of information among the countries regarding the occurrence of the disease in man and animals, as well as different aspects related to the development of programs and the implementation of specific activities.

To that end, **the countries** have committed their efforts to improve the information they send to the Pan American Health Organization; **PAHO**, for its part, has agreed to cooperate with the countries in the implementation and functioning of their National Epidemiological Surveillance Systems, as well as in the coordination and operation of the "**Regional Information System on Rabies in the Americas**".

The main objectives are:

- * To compile, process and disseminate information leading to an updated outlook on the distribution and trends of rabies in the Americas;
- * To provide the governments with timely periodic reports with the purpose of preserving areas that are free from rabies, fighting epidemics and keeping the disease under control;
- * On the basis of the information provided by the countries themselves, to identify areas of research aimed at solving specific problems;
- * To orient and stimulate intra and intersectorial cooperation at the country level in fighting against rabies, as well as the coordination of activities and collaboration among countries at the subregional and regional levels.

The Regional Information System on Rabies in the Americas comprises the following:

- * Weekly Epidemiological Report on Human and Canine Rabies
- * Monthly Report on Rabies in Man and Animals
- * Epidemiological Report: Rabies in Man
- * Annual National Survey on Rabies in the Countries
- * Special Reports
- * Bulletin: Epidemiological Surveillance of Rabies in the Americas (VERA).

On the basis of comments and suggestions received at INPPAZ slight modifications have been introduced in some of the forms currently in use and a software is being prepared which will enable the countries that so wish to automate the management of those forms and to perform some technical and operative analyses.

The current issue of this Bulletin includes instructions regarding the following: A. Weekly Epidemiological Report ; B. Monthly Report; and C. Epidemiological Report: Rabies in Man (Clinical Cards). As mentioned previously, all suggestions on the design and/or contents of the forms will be appreciated and given due consideration in the understanding that they are submitted as a contribution to the improvement of the present system.

A.- WEEKLY EPIDEMIOLOGICAL REPORT ON HUMAN AND CANINE RABIES.-

Objective: updated, systematic, and timely information on the **occurrence** or absence of cases of rabies in humans and pet animals in **each epidemiological week** in all countries of the region.

Frequency: weekly.

Time limit for submitting information: within the epidemiological week following that to which the data refer.

Interpretation: cases reported through this system will be considered as "presumptive cases" unless specific information to the contrary is received from the reporting unit.

Reporting Units: the countries, in the case of the Regional Information System, and within each country, all those agencies that the national health authority determines.

Procedure for sending information: telex, fax or any other written procedure accepted officially by the health reporting unit.

International flow:

- a.- From the countries to INPPAZ/PAHO/WHO: it is suggested that communications be channelled through the PAHO/WHO Country Representations by the person in charge of the National Program for the Control of Rabies.
- b.- From INPPAZ to the countries: **always** through PAHO Representations.

National flow: as established by each country.

Contents of the message:

- 1.- Number of the Epidemiological Week.-
- 2.- Rabies in humans.-

- 2.1.- If there were cases:- indicate the total number of cases occurred during period and for **each case** specify: geographic location indicating the largest political and administrative division (department, province or state) and the smallest (municipality, district, parish); sex and age.

Example: number of cases TWO (2).

- 1: Department XXXX; Municipality xxxx; Female; 11 years old.
- 2: Department ZZZZ; Municipality zzzz; Male; 9 years old.

Note: other information may be included, such as: geographic coordinate; if laboratory result is pending; whether case is in urban area; however, under no circumstances should the data mentioned in 2.1 above be omitted.

- 2.2.- If there were no cases: write down the following:

Rabies in humans: NEGATIVE

- 3.- Rabies in animals.-

- 3.1.- If there were cases: indicate for each species:

- 3.1.1. Name of the species;
- 3.1.2. Total number of cases discriminated by the largest and smallest political and administrative division.

Example.-

Canine rabies: THREE (3) cases:
Province: AAA (2): Municipality: aaa (1); Municipality: ddd (1)
Province: BBB (1): Municipality bbb (1).

Feline rabies: ONE (1) case:
Province CCC (1): Municipality ccc (1).

Note: it is also suggested that the countries free from "urban rabies" include in their weekly report all cases compatible with rabies observed in any animal species.

Example:

Bovine rabies: ONE (1) case : Province HHH (1): Municipality hhh (1).

- 3.2.- If there were no cases: Animal rabies: NEGATIVE.

B.- MONTHLY REPORT ON RABIES IN MAN AND ANIMALS.-

Objective:- keep periodic statistics on the occurrence of rabies cases in man and animals in all countries of the Region, either confirmed by laboratory tests or determined only on the basis of clinical and epidemiological evidence.

Frecuency:- monthly.

Time limit for sending information:- within the calendar month following that to which the data correspond.

Interpretation:- cases included in this report are considered as final for the reporting country and modifications can only be made through an official statement from the corresponding health authority.

Reporting Units:- the countries, in the case of the Regional Information System. Within the countries, the National Compiling Unit should keep in permanent touch and coordinate action with all responsible government agencies to ensure that all information included in the Monthly Report is complete and reliable.

Form: IPZ-SIR-I (Page 29).

Procedure for sending information:- by fax or mail, or through the PAHO/WHO Country Representation.

Instructions for completing the IPZ-SIR-I.

- 1.-Country: Name of the reporting country.
- 2.-Month: Month which corresponds to the information being reported.
- 3.-Year: Year which corresponds to the information being reported.

PART I:

4.-If no cases of human rabies have been registered during the period being reported, place a cross in the corresponding space.

5.-If cases of human rabies have occurred during the period, complete the table following this item.

6.-**Place of residence:** Urban, Rural: Complete as required, according to the place of residence of the patients and the type of diagnosis performed.

7.-**Clinical diagnosis without laboratory examination:** The number of human cases whose diagnosis was based exclusively on medical observation should appear in this box. Cases should be classified into urban or rural, according to the place of residence.

8.- **With laboratory confirmation:** The number of human cases whose final diagnosis

was based in confirmation by laboratory methods, such as positive immunofluorescence, or inoculation, should be noted in this box. Cases should also be classified according to their origin into urban or rural.

9.-Totals: These boxes should be completed with the corresponding vertical and horizontal sums.

PART II:

10.-If during the period being reported no cases of rabies in animals occurred, place a cross in the corresponding space.

11.-If there were cases of rabies in animals during the period being reported, complete the corresponding table.

12.-Species: Indicate in this column the number of rabies cases which occurred during the period in each of the species. If there were cases in species other than those mentioned, put down the corresponding data in the boxes "others (specify)" and "not specified", as the case may be.

13.-Number of cases: Write down the total number of cases occurred in each species, according to the diagnosis performed.

14.-Clinical diagnosis without laboratory examination: Write down in the corresponding boxes the number of cases of animal rabies, by species, that have been under veterinary observation. This diagnosis is only accepted for cases of rabies in domestic animals (dogs, cats, bovines, sheep, swine, camelidae, etc.). Clinical diagnosis will not be accepted for cases of rabies in wildlife species (rodents, foxes, skunks, bats, or others). These figures should be taken from the information compiled by the different sectors involved (Public Health, Animal Health, accredited laboratories) with whom the national compiler should coordinate actions and keep in permanent contact.

15.- With laboratory confirmation: Write down in this box the number of cases of rabies in animals, by species, regardless of the laboratory method used for confirmation (immunofluorescence, inoculation, etc). It is possible that samples which at a certain time show negative results to a test, are later on positive to another test; in such cases, the final result should be recorded in the month when that result became known; however in the space reserved for observations mention should be made of the month to which it really corresponds.

16.-Totals: These boxes should be completed with the corresponding vertical and horizontal sums.

17.-General comments and observations: Write down any other comment of interest providing further information on the cases being reported.

18.-Report prepared by: Indicate the name and post of the person signing the report, as well as the service to which he/she belongs and the date in which the report was prepared.

C.- EPIDEMIOLOGICAL REPORT: RABIES IN MAN (CLINICAL CARD).-

Objective:- Performing studies with the purpose of identifying aspects related to persons, time, places, and population groups at a higher risk of exposure to rabies regarding which it may be necessary to orient future actions and possible research on various aspects, including care of exposed persons, antirabies treatment, training, and health education.

Periodicity:- occasional, depending on the occurrence of rabies cases in humans.

Time limit for sending information:- within the calendar month following that in which the cases occurred; should be sent together with the Monthly Report, IPZ-SIR-I.

Interpretation:- the cases on the basis of which this report is prepared will be considered final and their number should correspond with the cases appearing in the monthly reports IPZ-SIR-I.

Reporting Units:- the countries, in the case of the Regional Information System. Within the countries, the National Compiling Unit should keep in touch and coordinate actions at all times with all responsible government agencies to ensure that the information included in the Report on Rabies in Man is complete and reliable.

Form: **IPZ-SIR-II** (Page 30).

Procedure for sending information:- by fax or mail o through PAHO/WHO Country Representations.

Instructions for preparing form IPZ-SIR-II.-

The clinical history of each case of rabies in man contains information of interest for surveillance purposes; it should be completed for all deaths resulting from this pathology.

A) Personal data

- 1.- Surname and name: Self-explanatory
- 2.- Age: Self-explanatory
- 3.- Sex: Place a cross in the corresponding space.
- 4.- Place of residence: Write the name of the country, largest political-administrative division (city, village, or area), as well as the province, department or state where the deceased person lived.

B) Rabies infection and treatment data

- 5.- Exposure to the virus: Indicate with a cross in the corresponding box if the exposure was due to bite or contact, or if the fact is not known.

- 6.- Indicate with a cross in the corresponding box the part of the body where the exposure occurred.
- 7.- Date of the exposure: Self-explanatory
- 8.- Indicate the country, province and city where the person was attacked; place a cross to indicate whether the attack occurred in a rural or urban area; inside a building or in the open.
- 9.- Type of injury: if the exposure was caused by bite, indicate whether it resulted in a single lesion or multiple lesions and whether they were superficial or deep.

C) Treatment data:

- 10.- Was serum administered?: self-explanatory; if the answer is yes, specify day, month and year.
- 11.- Was rabies vaccine administered?: This is related to exposure ending in death. Specify the number of doses given and the date of the first and last.

D) Data on the disease

- 12.- Date of the first symptoms: Self-explanatory
- 13.- Date of death: Self-explanatory
- 14.- Diagnostic confirmation: Mark with a cross the method(s) used or if a method other than those mentioned was used, specify which.

E) Data on the animal that caused the exposure

- 15.- Species: Self-explanatory
- 16.- Indicate whether the diagnosis was confirmed by the laboratory. If there was no laboratory confirmation, it will be considered a case of animal rabies on clinical grounds exclusively.

F) Data on the person reporting the case: Self-explanatory



MONTHLY REPORT ON RABIES IN MAN AND ANIMALS

1. Country _____	2. Month _____	3. Year _____
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PART I

4.- If there were no cases of human rabies during the month, state so here: _____

5.- If there were cases of rabies in humans during the month, complete the following table:

6. Residence	7. Clinical diagnosis without laboratory testing	8. Confirmed by the laboratory	9. Totals
Urban			
Rural			
Totals			

PART II

10.- If there were no cases of animal rabies during the month, state so here: _____

11.- If there were cases of animal rabies during month, complete the following table:

12. Species	13. Number of cases		16. Totals
	14. Clinical diagnosis without laboratory test	15. Confirmed by the laboratory	
Dog			
Cat			
Bovine			
Vampire			
Other Bats			
Foxes			
Skunks			
Other (specify)			
Not specified			
Totals			

17. Comments and general observations: _____

18. Report prepared by:
 Surname and Name: _____
 Service: _____

Place and date: _____ Signature: _____



EPIDEMIOLOGICAL REPORT: RABIES IN MAN

A) PERSONAL DATA

1. Surname and Name:	2. Age:	3. Sex: Male <input type="checkbox"/> Female <input type="checkbox"/>
4. Place of Residence:		
Country	Province, Department, State	City, Village, Area

B) DATA ON THE EXPOSURE

5. Exposure to the virus: Bite: <input type="checkbox"/> Contact: <input type="checkbox"/> Not known: <input type="checkbox"/>	6. Location (if bite) Head <input type="checkbox"/> Hand <input type="checkbox"/> Trunk <input type="checkbox"/> Upper limbs <input type="checkbox"/> Lower limbs <input type="checkbox"/> (if necessary, mark more than one)	7. Date of the exposure: _____ Day Month Year
8. _____ Country, Province and City or Village where the person suffered the exposure Urban area <input type="checkbox"/> Rural area <input type="checkbox"/> Inside a building <input type="checkbox"/> In the open <input type="checkbox"/>		9. Type of injury: Single: <input type="checkbox"/> Multiple: <input type="checkbox"/> Superficial: <input type="checkbox"/> Deep: <input type="checkbox"/>

C) TREATMENT DATA

10. Serum administration: Yes <input type="checkbox"/> No <input type="checkbox"/> Not known <input type="checkbox"/> If administered, give date: Day _____ Month _____ Year _____	11. Antirabies vaccine administration: Yes <input type="checkbox"/> No <input type="checkbox"/> Not known <input type="checkbox"/> If administered, indicate: N° of doses _____ Date 1st dose _____ Date last dose _____
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D) DATA ON THE DISEASE

12. Date of the first symptoms: Day _____ Month _____ Year _____	13. Date of death: Day _____ Month _____ Year _____	14. Methods of diagnostic confirmation: Sellers <input type="checkbox"/> I.F. <input type="checkbox"/> Inoculation <input type="checkbox"/> Other <input type="checkbox"/> Specify _____
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E) DATA OF THE ANIMAL THAT CAUSED THE EXPOSURE

15. Species: Dog <input type="checkbox"/> Cat <input type="checkbox"/> Not known <input type="checkbox"/> Other <input type="checkbox"/> Specify _____	16. Laboratory confirmation of rabies: Yes <input type="checkbox"/> No <input type="checkbox"/> Not known <input type="checkbox"/>	17. Methods of diagnosis confirmation: Sellers <input type="checkbox"/> I.F. <input type="checkbox"/> Inoculation <input type="checkbox"/> Other <input type="checkbox"/> Specify _____
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F) DATA OF THE PERSON REPORTING

Surname and name:	Post:
Service	Date:
	Signature: