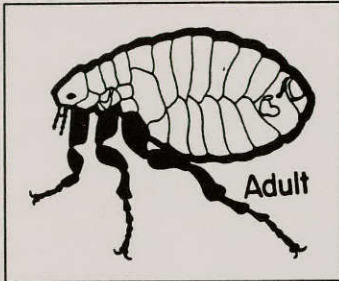


DPN

disease prevention news

Plague in Texas



The fourth case of human plague with exposure in Texas since 1980 has been reported from Kent County. On

April 25, 1993, a 94-year-old woman was admitted to St. Mary's of the Plains Hospital in Lubbock. The day before, she had started feeling confused and experienced the onset of fever (103°F), headache, and body aches. The initial diagnoses included sepsis, dehydration, and possible pneumonia. Treatment with ceftriaxone was begun. On the second day of hospitalization, she developed swelling in the left side of her neck and complained of difficulty swallowing. A CT scan of the neck did not identify any abscess or lymphadenopathy. Ceftriaxone was discontinued and she received ampicillin and sulbactam for ten days. The neck swelling resolved over the next five days. On the seventh day of

hospitalization *Yersinia pestis* was identified in a blood specimen collected on admission. Treatment with doxycycline was begun. The patient recovered gradually and was discharged on May 4, 1993.

Texas Department of Health, with assistance from the Centers for Disease Control and Prevention, has undertaken an extensive investigation of the situation. The woman had not traveled outside of Kent County in 1993. Studies to determine the presence of infected rodents and fleas have begun. Although she had no history of handling dead rodents, she did have a flea problem inside her home.

In addition to the human case, several confirmed animal plague cases in Taylor, Lamar, and Dallas counties are being investigated. The next issue of DPN will contain an in-depth report on current plague activity.




1991 Texas Behavioral Risk Factor Survey: HIV and AIDS

In the summer of 1981, the first accounts of an unusual immune system disorder were reported by the Centers for Disease Control and Prevention (CDC). Five people from New York and California were known to be affected. By mid-1982, the disease had a name: Acquired Immunodeficiency Syndrome or AIDS. Several hundred U.S. cases were reported by this time,

and many of those had already died. In 1983 the virus believed to cause AIDS was discovered; soon afterwards, it became apparent that a person could be infected with the Human Immunodeficiency Virus (HIV) and transmit it to others long before

Also in this issue:
Bi-monthly statistical summary
Erratum

Continued 

Texas Department of Health

U OF NT DEP. LIBRARIES 76203

2

developing any outward symptoms. As 1984 began, 165 Texas residents had already been diagnosed with AIDS. At the end of 1991, a decade after the first five cases signaled the beginning of the epidemic, 14,546 Texas AIDS cases had been reported, and AIDS had become one of the ten leading causes of death in the state. Using the new guidelines for defining AIDS, implemented in January 1993, 29,000 Texas AIDS cases are expected by the end of 1994.^{1,2}

There is no vaccine to protect against HIV infection. There is no cure for HIV or AIDS. Researchers trying to develop vaccines or cures depict the virus as a formidable adversary. Advances in medical care and drugs have increased survival time for people already infected with the virus. There is reasonable hope of extending life even further and managing HIV/AIDS as a chronic – but still – finally fatal disease. Knowledge about the behavioral risk factors associated with infection and the willingness to use that knowledge remain the only real defenses against HIV. Reducing those risks is the key to preventing AIDS.

Because knowledge and attitudes often determine behavior, the Behavioral Risk Factor Survey (BRFS) has included, for the last two years, questions to measure what Texans know and feel about HIV/AIDS. The BRFS is funded by CDC and is conducted annually in the majority of the states. The Texas Department of Health (TDH), Public Health Promotion Division supervises this survey, which is implemented through an inter-agency agreement with the University of Texas, Office of Survey Research. Residential telephone numbers are selected at random; individuals interviewed must be at least age 18. In households with more than one eligible respondent, the actual re-

spondent is selected randomly. If that person is unavailable, another phone number is chosen. CDC developed the HIV and AIDS questions which are asked of respondents in all participating states.

The 1991 sample included 1,503 Texans. Fifty percent of the usable phone numbers dialed resulted in respondents who completed the survey, 17% in respondents who refused to participate, 8% in respondents who were unavailable at the time, and 25% in busy signals or no answer.³

The TDH HIV Division analyzes the data and prepares reports on the Texas sample using a CDC-computed weighting factor designed to compensate for telephone sampling bias and to adjust for age, race, sex, and probability of selection. The weighted percentages for demographic categories are shown in Table 1. White Non-Hispanics were overrepresented in the survey and minorities were underrepresented. Distinctions between groups of respondents are made based on chi-square and standard error tests of differences between rates.

Table 1. Demographics of Sample (N=1,503)

Category	Weighted Percent*
Sex	
Male	48.7
Female	51.3
Race/Ethnicity	
White Non-Hispanic	72.9
African American	6.7
Hispanic	18.8
Other	1.5
Age Group	
18-24	15.9
25-54	60.1
55+	24.0
Household Income	
<\$25,000	52.0
≥\$25,000	48.0
Education	
None through technical school	50.7
Some college or more	49.3

* may not equal 100% due to rounding

HIV/AIDS Knowledge

Have you ever heard of the AIDS virus called HIV? (YES)

To your knowledge, are there drugs available which can lengthen the life of a person infected with the AIDS virus? (YES)

Do you think a person who is infected with the AIDS virus can look and feel well and healthy? (YES)

Do you think you can get infected by giving blood? (NO)

Do you think a pregnant woman who has the AIDS virus can give it to her baby? (YES)

The first four items were asked in 1990 and 1991; there were no statistically significant changes in overall 1991 Texas responses from those given by study participants in 1990. In 1990, 91% had heard of AIDS; in 1991, 96% of those surveyed said "yes" to the question. In 1990, 46% were aware of drugs which can lengthen the lives of people with HIV or AIDS; in 1992, 50% demonstrated knowledge of this issue. During the first year, 59% answered correctly that giving blood is not a risk; this year, 57% answered the question correctly. On the item querying knowledge of whether or not HIV-infected people can look and feel healthy, the percentage responding correctly went from 64% to 68% from 1990 to 1991. In 1991, the first time respondents were asked whether an infected mother could pass HIV to her unborn child, 92% gave correct responses. These five questions were used to examine differences in knowledge in 1991 among Texas' diverse populations.

Recent trends in Texas show a changing AIDS epidemic. AIDS cases exposed to HIV through male-to-male

sex appear to have stabilized at a high level; cases reported as of August 31, 1992 yield estimates (adjusted for reporting delay) of just over 2,100 diagnoses in this category in 1990 and 1991.⁴ Adjusted adult-adolescent cases related to hemophilia or transfusions have declined 34% between the two years. AIDS cases among injecting drug users (IDU), women and young children, and some minorities are increasing rapidly. From 1990 to 1991, the following increases in AIDS diagnoses were observed: IDUs, 14%; women, 29%; children under the age of 5, 43%; and African Americans, 11%. Demographic factors in the behavioral risk factor survey thus take on added importance; they are useful in identifying populations whose knowledge about AIDS needs to be increased.

Demographic characteristics are themselves often closely intertwined. For example, respondents' yearly household income was related to educational level. Only 34% of the people interviewed with incomes less than \$25,000 a year had been to college; 53% of those making \$25,000 or more had gone beyond a high-school education ($p < .01$). Fifty-six percent of all White Non-Hispanic respondents had some college, while 36% of the African Americans, and 27% of the Hispanics had some college ($p < .01$). Similarly, 55% of the White Non-Hispanics had incomes over \$25,000 but among African American and Hispanic participants, the percentage was only 32% and 34% respectively ($p < .01$).

Knowledge about HIV/AIDS was related to age ($p < .01$), household income ($p < .01$), education ($p < .01$), and racial or ethnic group ($p < .01$). Minorities, older people, and those with less income and education had less knowledge about the disease (See

4

Figure 1). Men and women were equally informed.

Eighty percent of all respondents gave correct answers to three or more of the five knowledge questions; the remaining 20% answered none, one, or two correctly. At first glance this may appear to be a significant increase in knowledge compared to 1990, when only 69% answered three or more correctly. However, one difficult question asked in 1990 was dropped and the less difficult question on maternal transmission was added in 1991, so such a conclusion is not warranted.

Another question, shown below, was added this year but it is excluded from the composite knowledge scores discussed above and used in Figure 1 due to uncertainty over its importance as a test of knowledge.

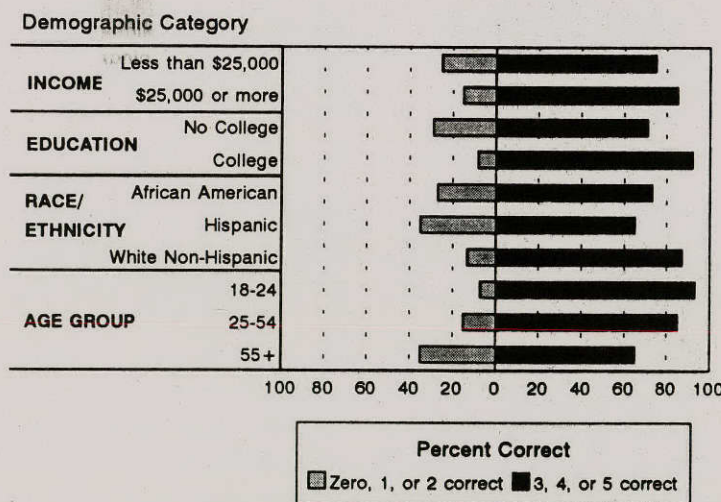
likely to get AIDS from having unprotected sex or sharing contaminated needles when abusing injectable drugs. Health care workers themselves are thought to run greater risks than patients since they see many patients daily and thus have many more potential low-risk exposures than patients. Even so, the overall risks for both groups are small.⁵⁻¹² Although this question may measure knowledge, it may also measure attention to the 1991 news reports of the dramatic and tragic (but not typical) instance of the only known health care worker to infect patients.

HIV/AIDS Attitudes

Would you eat in a restaurant where the cook is infected with the AIDS virus? (YES)

Would you be willing to work with a person who is infected with the AIDS virus? (YES)

Figure 1. 1991 Knowledge Questions



Do you think you can get infected with the AIDS virus from being cared for by a health professional who has the AIDS virus? (YES)

Sixty-seven percent answered this item affirmatively. It is important to remember, however, that the known risks of getting HIV this way are extremely small. People are much more

likely to get AIDS from having unprotected sex or sharing contaminated needles when abusing injectable drugs. Health care workers themselves are thought to run greater risks than patients since they see many patients daily and thus have many more potential low-risk exposures than patients. Even so, the overall risks for both groups are small.⁵⁻¹² Although this question may measure knowledge, it may also measure attention to the 1991 news reports of the dramatic and tragic (but not typical) instance of the only known health care worker to infect patients.

Twenty-four percent responded "yes" to both questions showing an understanding that no evidence of transmission through routine social contacts or food preparation has ever been reported. Nevertheless, 47% gave positive responses only once and 30% gave no positive responses (see Figure 2). Attitudes were related to income ($p < .01$), education ($p < .01$), age ($p < .01$), and race/ethnicity ($p = .02$). People in demographic groups with less knowledge gave more negative or neutral responses. People age 55 and older gave negative or neutral responses more often than younger adults age 18 to 54. African Americans and Hispanics were more likely than White Non-Hispanics to say "no" or "don't know" to both questions. The graph in Figure 2 shows that people with lower incomes and less education were less likely to give positive responses. Overall, 70% said they would be willing to work with a

person who is infected with the AIDS virus, but 67% said they would not eat in a restaurant where the cook has AIDS.

These were not significantly different from the responses given the previous year. Attitudes are important because they may predict how hard it will be to reach people with risk-reduction information and how hard it will be to convince them to change their behavior.

HIV/AIDS Education

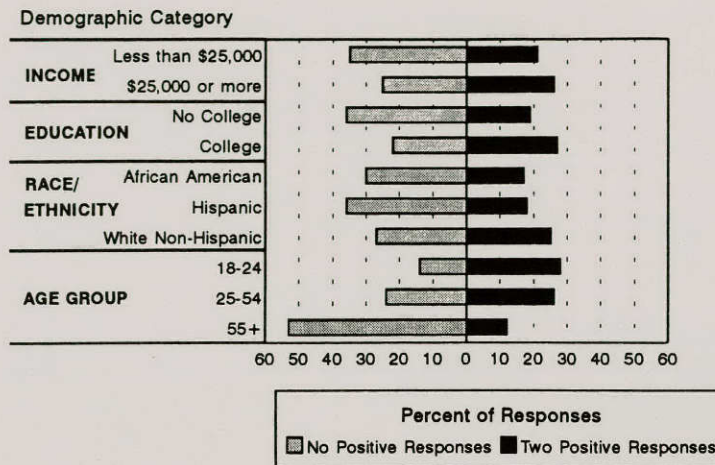
Parents who had children in kindergarten through eighth grade were asked questions about AIDS and education. Parents were more likely to be Hispanic or African American than other survey respondents ($p=.02$); they also tended to fall in the age group 25-54 ($p<.01$).

Would you allow your child to be in the same classroom with a child who is infected with the AIDS virus? (YES)

What grade do you think your child should begin AIDS education? (EARLY)

Seventy-three percent of the parents surveyed said they would allow their child to remain in a classroom with a fellow student who had HIV/AIDS. (See Figure 3). White Non-Hispanic parents said "yes" to this question more often than African American parents, who, in turn, said "yes" more often than Hispanic mothers and fathers ($p<.01$). Mothers were more likely to give positive responses than fathers ($p<.01$), as were respondents with higher incomes ($p=.02$) and educational levels ($p=.02$).

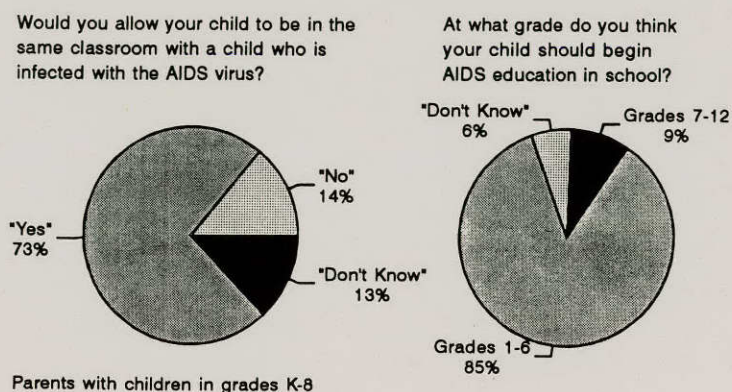
Figure 2. 1991 Attitude Questions



Eighty-five percent of the parents with younger schoolchildren wanted their children to begin AIDS education in elementary school. (See Figure 3). Only 9% preferred that such education be delayed until junior high (grades 7-9) and only 1% wanted AIDS education to start as late as high school (grades 10-12). Income, race/ethnicity, and education made no difference in their responses. Mothers were somewhat more inclined to advocate early education ($p<.01$), but parents of both sexes overwhelmingly supported starting AIDS education in elementary school.

As with responses to other questions, 1991 participants' answers varied a few percentage points from those given in 1990, but the difference was not significant.

Figure 3. AIDS and Education



Parents with children in grades K-8

6

Condom Opinions

How effective do you think using a condom is in preventing getting the AIDS virus through sexual activity?
(VERY EFFECTIVE, WHEN USED PROPERLY)

Eighty-four percent of those polled thought that condoms are either very effective or somewhat effective in preventing exposure to HIV through sexual activity. However, 55% said that condoms are "somewhat effective," while only 29% responded "very effective." Only 7% of those surveyed believed condoms are ineffective. Others did not know how well condoms protect against the AIDS virus (7%) or they were unfamiliar with this method of HIV prevention (1%). Very few of the Texas respondents refused to answer the question (1%). There were no significant changes from 1990 in overall responses to the question on condoms. Men were more likely than women to view condom use as highly effective ($p < .01$). People with incomes below \$25,000 were more likely than others to think that condom use is not at all effective in preventing exposure to the virus that causes AIDS ($p < .01$). People with at least some college education ($p < .01$) and younger people ($p = .02$) believed that condom use is very effective more often than their counterparts in the survey. The most common way HIV is spread is through sexual activity. Viewing condoms as effective in preventing HIV infection may be of prime importance in checking the HIV epidemic.



References:

1. 1993 Revised Classification System for HIV Infection and Expanded Surveillance Case Definition for AIDS among Adolescents and Adults, *MMWR* 1992;41,RR-17: 1-19.

2. Emily Townsend, Projected AIDS Cases for the Years 1992 Through 1995, *Texas Preventable Disease News*, 1993;53:2,5.
3. Texas Behavioral Risk Factor Surveillance: Final Overview. Texas Department of Health, February 1993, 7.
4. Cases in the mode of exposure category, Male-to-Male Sex (as well as those in many other categories), are expected to increase when data for cases reported under the new AIDS case definition are added.
5. Chamberland ME, Conley LJ, et al. Health Care Workers with AIDS: National Surveillance Update. *JAMA* 1991;266:3459-62.
6. Henderson DK, Fahey BJ, et al. Risk for Occupational Transmission of Human Immunodeficiency Virus Type 1 (HIV-1) Associated with Clinical Exposures: A Prospective Evaluation. *Ann Intern Med* 1990;113:740-6.
7. Recommendations for Preventing the Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Patients During Exposure-Prone Invasive Procedures, *MMWR* 1991;40,RR-8:1-8.
8. Tokars JI, Bell DM, et al. Percutaneous Injuries During Surgical Procedures. *JAMA* 1992;267:2899-2904.
9. Update: Investigations of Patients Who Have Been Treated by HIV-Infected Health Care Workers, *MMWR* 1992;41,19: 344-7.
10. Rogers AS, Froggatt JW, et al. Investigation of Potential HIV Transmission to the Patients of an HIV-Infected Surgeon. *JAMA* 1993;269:1795-1801.
11. Dickinson GM, Morhart RE, et al. Absence of HIV Transmission from an Infected Dentist to His Patients: An Epidemiologic and DNA Sequence Analysis. *JAMA* 1993;269:1802-6.
12. von Reyn CF, Gilbert TT, et al. Absence of HIV Transmission from an Infected Orthopedic Surgeon: A 13-Year Look-Back Study. *JAMA* 1993;269:1807-11.

*For more information
contact Sharon King,
HIV Division, at
(512) 458-7209.*

Erratum: In DPN Vol. 53, No. 8
"diphtheria" should have been spelled
"diphtheria."

Monthly Statistical Summary of Selected Reportable Diseases

Selected Diseases/Conditions	HHSC Region											Selected Texas Counties							This Period		Cumulative[1]		
	1	2	3	4	5	6	7	8	9	10	11	Bexar	Dallas	El Paso	Harris	Hidalgo	Nueces	Tarrant	Travis	1992	1993	1992	1993
Sexually Transmitted Diseases[2]																							
Syphilis, primary and secondary	0	7	150	17	29	117	56	20	11	7	9	16	77	6	95	1	7	58	24	668	423	1,160	863
Congenital Syphilis	0	0	10	0	1	23	2	1	1	6	4	0	8	6	21	3	0	3	0	75	48	97	92
Resistant Neisseria gonorrhoeae	7	0	44	0	0	4	36	21	0	2	0	21	13	2	4	0	0	3	0	224	114	550	204
Enteric Diseases																							
Salmonellosis	2	2	15	4	1	10	21	21	7	58	14	15	10	58	5	0	5	4	12	254	155	441	285
Shigellosis	16	15	78	6	0	11	208	111	11	1	17	74	29	1	6	0	14	15	52	277	474	470	1,022
Hepatitis A	13	0	80	0	0	17	18	58	9	19	14	34	27	19	17	8	3	44	15	294	228	567	550
Campylobacteriosis	0	0	8	2	2	11	26	14	0	5	5	10	6	5	8	0	3	0	16	127	73	230	186
Bacterial Infections																							
H. influenzae, invasive	0	0	0	2	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	7	4	17	12
Meningococcal, invasive	0	1	9	4	2	1	0	0	0	0	0	0	1	0	1	0	0	3	0	25	17	51	45
Lyme disease	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	27	2	35	4
Vibrio species	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	1
Other Conditions																							
Influenza & flu-like illness	3,005	232	1,160	514	173	49,182	2,463	1,286	1,289	49	2,470	882	0	49	49,072	0	1,882	48	255	10,992	61,823	26,230	185,006
AIDS[4]	58	13	943	33	14	470	137	54	27	30	103	46	809	30	432	18	43	90	71	625	1,868	1,128	3,122
Hepatitis B	0	2	63	6	1	15	10	18	3	9	8	12	33	9	10	0	5	21	8	355	135	645	353
Adult elevated blood lead levels	3	1	13	0	0	0	0	26	0	0	0	26	13	0	0	0	0	0	0	52	43	293	213
Animal rabies - total	0	0	0	0	0	0	0	2	1	1	14	0	0	0	0	5	0	0	0	12	18	27	42
Animal rabies - dogs and cats	0	7	6	2	0	7	15	5	26	2	27	0	0	0	1	6	0	0	2	135	101	200	173
Tuberculosis Disease[2]																							
Children (0-14 years)	0	0	1	0	2	7	2	2	0	1	3	0	0	1	6	2	0	1	1	24	18	31	28
Adults (>14 years)	4	4	56	10	8	142	25	16	8	10	32	9	37	10	117	7	5	14	13	387	315	501	455
Injuries[2,3]																							
Spinal Cord Injuries	2	0	17	0	3	7	2	3	6	2	1	2	11	2	5	1	0	5	1	14	50	20	181

1. Cumulative to this month.
2. Data for the STD's, Tuberculosis, and spinal cord injuries are provided by date of report, rather than date of onset.
3. Voluntary reporting.
4. AIDS totals include reported cases from Texas Department of Corrections, which are not included in the regional and county totals. March and April numbers reflect the new case definition and clean-up process.

1992 POPULATION ESTIMATES

HHSC REGIONS	
1	749,158
2	530,279
3	4,457,134
4	919,677
5	676,718
6	4,055,407
7	1,785,214
8	1,849,649
9	528,345
10	647,298
11	1,416,866

SELECTED TEXAS COUNTIES	
Bexar	1,225,595
Dallas	1,923,031
El Paso	622,966
Harris	2,931,867
Hidalgo	408,450
Nueces	300,700
Tarrant	1,277,625
Travis	593,536





Disease Prevention News (ISSN 1068-7920) is a free, biweekly publication of the Texas Department of Health, 1100 West 49th Street, Austin, TX 78756-3199. Second-class postage paid at Austin, TX.

POSTMASTER: Send address changes to Disease Prevention News, 1100 West 49th Street, Austin, TX 78756-3199.

Ron J. Anderson, MD, FACP
Chairman, Texas Board of Health

David R. Smith, MD
Commissioner of Health

Diane Simpson, PhD, MD
State Epidemiologist
Associate Commissioner for Disease Prevention

Kate Hendricks, MD, MPH&TM
Developmental Editor

Susan Hammack, MEd
Managing Editor

Tabitha K. Bergman
Production Assistant

Disease Prevention News
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3199

Second Class Postage
Paid at Austin, TX

Return Postage Guaranteed

Vaccine-Preventable Disease Update

Suspected and/or confirmed cases with onsets from 3/1/93-4/30/93

Condition	County	Number of Cases	Date of Onset
Measles	El Paso	1	4/15*
	Fort Bend	1	4/06
	Harris	2	3/15 3/24
Rubella	Johnson	1	3/18
	Uvalde	1	3/26*
Pertussis	Ellis	1	3/10
	Gregg	1	3/22
	Nacogdoches	1	4/25*
YTD	Measles 53	Rubella 18	Pertussis 11

* Latest known onset

Telephone Information Services

- AIDS Clinical Trials Information 800-TRIALS-A
- Texas AIDS Legal Assistance Hotline 800-828-6417
- National Drug Abuse Hotline 800-662-HELP
- National AIDS Hotline 800-342-AIDS
- (Hearing impaired) 800-AIDS-TTY
- (Spanish language) 800-344-SIDA
- National AIDS Clearinghouse 800-458-5231
- Office of Minority Health
- Resource Center 800-444-MHRC
- Texas AIDSLINE 800-299-AIDS
- (TTY/TDD - for hearing impaired) 800-252-8012
- Texas AZT Hotline 800-255-1090
- Texas HIV Funding
- Information Center 512-458-7684
- Texas Information Service
- for Health Professionals 800-548-4659

UNT LIBRARIES DENTON TX 76203



1002558779