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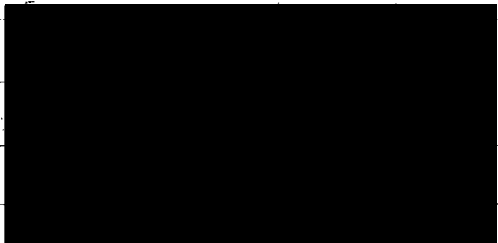
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CLAPTRAP:  
GONORRHEA, VICTIM-BLAMING  
AND  
EPIDEMIOLOGICAL CONTROL

by

Ronald N. Labonte  
B.A., University of British Columbia, 1974

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
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## Abstract

The central argument of this thesis is that control of sexually transmissible diseases ("V.D.") cannot be isolated from cultural and sexual systems of constraints. Specifically, it is argued that disease-control concepts have been used generally more for the purpose of promulgating certain forms of sexual behaviour than with actually decreasing the prevalence of disease.

The thesis begins with a brief overview of the "social history" of two disease organisms--syphilis and gonorrhoea--to establish an "organism" point of view. The sexual vector of transmission of these diseases is analyzed as an adaptive measure in their relationship to their host population and the larger social and physical environment.

The second chapter discusses the historically-conditioned attitudes towards V.D., beginning with the concept of disease and demons which characterized many religions (including early Christianity) and proceeding through secular morality and 20th century psycho-social theories of V.D. and individual deviance. The unifying assumption of all these moral/attitudinal systems is that the host and his/her behaviour pattern (especially the number of different sexual partners the host has) is the most important "cause" of V.D. In turn, people who have multiple sex partners are deemed to be immoral, socially unfit, personally neurotic or of low mentality. This model of disease-definition invariably blames the victim (notably women) for the disease, and seriously impedes efforts to treat infections and contain

the spread of the epidemic. It also deflects attention away from the environment--which both conditions individual behaviour and provides the medical systems for disease intervention--and its responsibility in maintaining the high prevalence of V.D., particularly gonorrhoea.

The third and fourth chapters narrow the focus to gonorrhoea. For reasons not fully understood, control of syphilis has been achieved whereas gonorrhoea remains relatively "out of control." Thus, the discussions in the third and fourth chapter do not apply to syphilis and other sexually transmitted infections. They may, however, relate to such V.D.'s as non-gonococcal urethritis, trichomoniasis and chlamydia, which have sites of infection, specific modes of transmission and "organism frailty" in common with the gonococcus causing gonorrhoea.

The third chapter outlines an epidemiological model of disease--the complex interrelationship of organism, host and environment--and isolates key variables within each category that either increase or decrease the "equilibrium prevalence" of gonorrhoea, i.e., the incidence of disease which would occur in the absence of any interventive measures. By contrasting disease rates and intervention systems in the United Kingdom and North America, it is apparent that inadequate environmental response--partially caused by the victim-blaming attitudes surrounding this disease, and aggravated by the effect of these attitudes on host behaviour--is responsible for as much as 90% of current disease prevalence.

The last chapter discusses a massive two and half year health promotion campaign in British Columbia that was directed at altering specific host behaviours, that would decrease the equilibrium prevalence of disease, as identified in the previous chapter. The campaign results are analyzed, and it is argued that the informed host does behave "responsibly", and that major control changes must now be directed at altering the environmental intervention-responses. Samples of the campaign's radio ads and posters are included as examples of V.D. messages containing a broad "epidemiological-moral" bias, rather than a hidden sexual value system.



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PREFACE

venereal disease, (ve-ne're-al [L. venerereus], di-sēz' [Fr. dés from + aise ease]), a contagious disease, most commonly acquired in sexual intercourse.

Dorland's Illustrated Medical Dictionary, 24th Edition, 1965

These be they that corrupt the whole Generation of Mankind in your Realm, that catch the Pockes of one Woman, and bear them to another; that be burnt with one woman, and bear it to another.

Henry VIII speaking of the Catholic priests in England, quoted in John Astruc's A TREATISE OF VENEREAL DISEASES, 1754

...in the treatment of venereal disease, physicians used a medical theory to control, not heal, women.

Gena Corea, discussing Lord William Acton's 1869 policy ("The Contagious Diseases Act") to forcibly examine women and not men, and, if the former were diseased, to lock them away for up to nine months in a special "lock hospital"; 1977

V.D. is like peanut butter: It spreads easy.

Slogan from a 1975 B.C. poster

Most illnesses suffered by men and women, whether clearly pathogenic or psychosomatic in origin, have their roots firmly embedded in the social behaviour of people. Infectious diseases, for example, have frequently been contained through relatively simple changes in personal hygiene. In other cases, changes in social customs and interpersonal behaviour, by altering the conditions under which contagion spreads, have either reduced or increased the prevalence of disease. But control of the so-called venereal diseases (V.D.) has been extremely difficult if for no other reason than the social behaviours which abet their contagion are enmeshed in the puzzle of religious, sexual and social structures and mores of society.

The following thesis stems from four years of personal experience in the V.D. Control program in British Columbia. Its structure parallels my own thoughts and feelings over those four years as I became progressively involved in efforts to alter the pattern of disease incidence in the province. My first effort related to my own embarrassment with the topic. Although I considered myself a fairly enlightened person, I was ambivalent about taking a new position as health education consultant with the Division of V.D. Control. I had just spent two and a half years with the Alcohol and Drug Commission as an information officer and researcher, and had never felt any reticence in that job with discussing all the research findings, intervention models and political gossip with friends and acquaintances. But with V.D. I feared answering even the simple question: What kind of work do you do now? For the first year



I found myself hemming and mumbling, making silly jokes and telling white lies, such as, "Oh, I'm into infectious diseases, sexuality, you know, that kind of stuff..." My close friends kidded me that I was working my way slowly through the seven deadly sins.

I was surprised at the extent to which the V.D. stigma had notched a little place for itself in my own value system, and undertook a "study program" to trace historically the source of that stigma. The outcome is the first two chapters of my thesis. Chapter one briefly describes the social history of the two best-known sexually transmitted infections, syphilis and gonorrhoea. Both diseases (and particularly syphilis) are revealed as fascinating organisms with long records of intimate relationship with their human hosts. Syphilis has been an especially pernicious companion to humankind, and a great puzzle to medical investigators because of its array of symptoms and the ability of its causative organism (a spirochete) to manifest itself as at least four different disease states.

I explain this latter feature using Hackett's environmental model of syphilis, in which it is assumed that disease organisms slowly adapted from a commensal to a pathogenic relationship with their hosts, and that each further adaptation (induced by changes in the physical and social environment) caused the pathogens to become more virulent. While this model does account quite handily for much of the disagreement surrounding the spirochete's history, it should be pointed out in fairness that the opposite

direction of adaptation (from pathogen to commensal) is equally valid and, at least from the organism's perspective, an indication of a more stable and biologically "sound" relationship with its host. For example, no antibody immunity develops against the spirochete in an "epidemic syphilis" disease-state. (as it does with other treponemal infections), thus increasing the host population by allowing people to become continually re-infected. Although epidemic syphilis is the most potentially morbid of the treponemal diseases, it kills only 25% of the host population it infects, and then only after a latency period of 20 or more years. In light of these features, it could be argued that the spirochete of epidemic syphilis is better adapted to and, in the majority of cases, more commensal with its host than are other spirochete infections.

My major purpose for including a social history of gonorrhoea and syphilis in my thesis is to introduce immediately the sense of viewing the disease process from the organism's perspective. My second chapter outlines the history of attitudes towards venereal diseases that markedly fails to do that, with the result of blaming the victim for his or her infection. I begin this chapter with an examination of Judaeo-Christian beliefs surrounding disease, and how the notion of demons and sin fostered a judgemental attitude towards V.D.-infected persons. The limitation of this particular section is that I neglect to analyze other social forces (e.g., class, ethnicity, slavery, conquest, and so forth) which affected the development of victimizing attitudes. Religious morality, then, is just one

example of institutional social prejudices which have acted to stigmatize V.D.-infected individuals.

My overview of disease attitudes continues into the 20th century, during which time a variety of psycho-social theories of V.D. emerged. Despite their scientific trappings, these theories continued to isolate the host from both the environment and the organism, generally regarding the host as possessing faults (either psychologically innate or socially conditioned) which explained why she or he became infected with V.D.

Throughout this second chapter, I argue that the reason for such an historically-entrenched victim-blaming approach lies in the unfortunate fact that V.D. control programs (both past and even to the present) have often been more concerned with control of sexual and social behaviour among individuals than they have with actual control of disease incidence. Furthermore, these programs, by focussing on the host's behaviour only (and a very limited aspect of his or her behaviour, i.e., number of sex partners) obscure the role that contemporary government programs and disease-management by private physicians play in actually maintaining high disease prevalence.

The interrelationship of disease organism, the host and the environment is the topic of the third chapter, in which an epidemiological definition of disease incidence and control is advanced in contrast to the "moral/behavioural" models discussed in chapter two. By the third chapter I am no longer concerned with V.D. in general, and the remainder of my argument applies primarily to gonorrhoea. Syphilis provided an entertaining

example of historical and attitudinal processes, but it does not represent an example of an "out of control" disease. For reasons no one fully understands, syphilis was brought dramatically under control in the 1950's, and its incidence in recent years is only a fraction of what it once was. Gonorrhoea incidence, in contrast, dropped along with syphilis during the 1950's, but started to skyrocket upwards during the 1960's until it peaked and held constant in 1975--again for reasons not fully grasped. Differences in incubation periods and antibiotic responses (organism factors) as well as in screening procedures and prophylactic testing (environment factors) partially account for the differences in disease rates. These and other epidemiological factors are discussed in relation to gonorrhoea in an effort to explain some of the dynamics which created the sudden increase in gonorrhoea incidence in the late 1960's.

This chapter also analyzes the specific features of organism behaviours, host behaviours and environment response which either increase or decrease the equilibrium prevalence of gonorrhoea, i.e., the "natural" prevalence of disease in the absence of any control measures. After de-mystifying the diverse aspects of host behaviour, viz., demonstrating that nature of sexual contact, choice of contraceptive method and quality of relationship communication are better predictors of disease-risk than is number of sex partners, I address the weaknesses of the control program in North America and proffer some

solutions. By comparing gonorrhoea rates in North America and Great Britain, I conclude that as much as 90% of gonorrhoea prevalence in North America is attributable to inadequacies in the medical system's response.

Chapter four outlines a specialized two and half year health promotion program on V.D. which I designed and executed. This campaign (which was primarily concerned with gonorrhoea) focussed on improving the specific host behaviours identified in the previous chapter: Better knowledge, prompt clinic attendance, responsible contact notification and prophylactic check-ups for high-risk persons. The results of this campaign indicate that informed hosts do respond in a responsible manner, and alter their behaviour such that the equilibrium prevalence of gonorrhoea would decrease. I conclude this chapter with sample radio and poster copy indicating how V.D. messages directed to the host can bypass the moral conundrums which have bothered disease control programs in the past and to the present.

While my data and control model applies to gonorrhoea (and certainly cannot be translated to syphilis or many other sexually transmitted infections), it may hold true for such infections as non-gonococcal urethritis, trichomoniasis, chlamydia and others which infect the urethra and vagina/cervix in ways parallel to the infectious process of gonorrhoea.

The bottom line for effective disease management (which may eventually produce a decline in disease prevalence) must be a coordinated effort to alter all those factors in the host and

the environment which serve to increase the equilibrium prevalence. At the same time, government control programs must find ways of improving and encouraging those host and environment factors which decrease the equilibrium prevalence. Barring discovery of a safe, effective and easily administered vaccine, this will be the only way in which we can, to quote a popular 1970's V.D. saying, "take the risks out of being close."

CHAPTER ONE

Passing the Pox: A Brief Social History of Syphilis  
and Gonorrhoea

...the small pox has gone out of late;  
Perhaps it may be followed by the great.

'Tis said the great came from America;  
Perhaps it may set out on its return,—  
The population there so spreads, they say  
'Tis grown high time to thin it in its turn,  
With war, or plague, or famine, any way,  
So that civilization they may learn;  
And which in ravage the more loathsome evil is—  
Their real lues, or our pseudo-syphilis?

Byron, 1818

Part One: Syphilis

Sir William Osler once wrote, "Know syphilis in all its manifestations and relations and all things clinical will be added unto you."<sup>1</sup> He was referring to the "great imitator" nature of this disease, its ability to mimic or resemble almost any other disease as it passes through its different stages. To know syphilis, then, is to comprehend and practice the art of diagnosis. But Osler could equally have written with only slight tongue-in-cheek that "he who knows syphilis also knows a good chunk of history", for there have been few diseases which have so decimated populations and altered the course of history.

It is now presumed that some of the most powerful post-Renaissance political leaders suffered from syphilis, including syphilitic insanity.<sup>2</sup> The litany includes Henry III, Henry VIII, Cardinal Wolsey, Edward VI and possibly Charles II of England; Charles VIII, Henries III, IV, and V, Cardinal de Richelieu and Louis XIV of France; Peter and Catherine the Great of Russia; [1]\* Popes Alexander VI, Julius II and Leo X of Rome; and Frederick the Great of Prussia. More ancient

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\* Footnotes are designated by lower case Roman numerals enclosed in brackets to distinguish them from references, and appear at the end of each Chapter. References are notated at the end of the



rulers who may have suffered the Pox include Ramses V of Egypt; Julius Caesar and Cleopatra; Herod, king of Judea; Roman Emperors Tiberius and Commodus; and Charlemagne, king of the Franks and Emperor of the Holy Roman Empire.

There were, of course, many non-political figures who were also smitten by the disease: Desiderius Erasmus, Albrecht Dürer, Benvenuto Cellini, Thomas Carew, Molière, Giovanni Casanova, James Boswell, Francisco Goya, von Goethe, John Keats, Franz Schubert, Friedrich Nietzsche, to name only a few.

Countless millions of others, whose names were remembered only by their mothers, also succumbed to the Pox plagues; as many as 15% of the European urban population may have suffered from syphilis during the 16th through 19th centuries.

There is an obvious fascination with political leaders who may have had the disease. For instance, could the madness of Henry VIII—brought on by syphilis—have been one of the catalysts to the formation of the Church of England? (Recall that in the second opening quotation Henry VIII appears to be blaming the Pox on the Catholic priests.) Was the cruel and wanton spending of a disease-insaned Louis XIV one of the precursors to the discontentment of the bourgeoisie which flamed the French Revolution? What role did the syphilitically influenced behaviours of Herod play in building the pacifist anti-Roman Christian movement?<sup>[ii]</sup> This may be only speculation, and no historical event proceeds from a single cause; but the role of syphilis in history has undoubtedly been great.

It determined that wigs would become the fashion of the day during the 16th through 19th centuries, when syphilitic baldness was rampant and incurable. It prevented the French from overrunning Italy in the late 15th century when the siege against Naples collapsed with the French armies decimated by the first known outbreak of the great Pox in recent history. And it has been responsible for more deaths and epidemics than almost any other disease known to humankind. It is estimated that it may have killed as many as 100,000,000 people worldwide since 1900 alone, and as recently as 1967 in the United States was responsible for 2,381 deaths.<sup>3</sup> (By 1979 this figure had dropped to 169.<sup>4</sup>)

The origin of this fascinating and lethal disease has been contentious for decades, with two explanations frequently proffered: the "Columbian" theory and the "evolution" theory. The first, the Columbian theory, is still the most commonly accepted. Columbus, as this story has it, left for the New World with a bit of extra baggage: small pox. The native Americans he encountered were none too appreciative and so blessed him with a gift of their own: the great Pox, or syphilis. Columbus and his crew returned to Europe saturated with spirochetes and, presuming that several of his crew joined the mercenary armies of Charles VIII in the siege at Naples, passed on the illness in great haste, resulting in the great Pox epidemics of the 16th century. The principle corroborative evidence supporting this theory is the fact that, prior to the

Naples siege, no recent written accounts of the disease existed in European societies. [iii] Although there is much more data to support an evolutionary theory of syphilis, public sentiment still goes over to the hapless Christopher and his crew. It's not hard to understand why: no society or nation has ever been pleased with the dubious honor of being the cradle of the treponematoses (the disease classification to which syphilis belongs.) Europe in the Middle Ages, in fact, had great fun playing a variation of the "pass the buck" game, known as "pass the pox". The Italians blamed it on the French; the French on the Italians and the English; the English on the French and Germans; the Germans on the French; the Polish on the Germans; the Russians on the Polish; the Turks on the Russians; the Persians on the Turks; and the Portuguese and Dutch on the Spanish. John Astruc, an 18th century physician, more or less put the blame to rest when he attributed the disease to Venus, goddess of sexual love. [iv] That it was a female figure held responsible is partially indicative of a patriarchal attitude surrounding V.D. which, as will be discussed later, has increased women's risks of disease morbidity.

The evolutionary theory, in contrast to the Columbian theory, does not attempt to fix blame, and has a unique advantage: it explains most of the facts presently known about syphilis. Let us begin with the spirochete.

Spirochetes are a family of microorganisms closely related to the bacteria. The term, "spirochete", comes from the



ILLUSTRATION 1: Passing the Pox: the Medieval Rage

Greek word meaning "coiled hair", which aptly describes the shape of the organism. The coiled hairs responsible for syphilis are called Treponema pallidum, a mixed etymology of Greek and Latin that means "the pale thread that turns around and around." These hyperactive corkscrews, however, do not cause syphilis only; they are also responsible for at least three (possible four or more) other illnesses known collectively as the treponematoses. In each case the spirochetes are morphologically indistinguishable, and this is the crux of the evolutionary argument.

First put forward by Dr. C.J. Hackett of the World Health Organization about fifteen years ago, this argument begins with the assumption that, once upon a time, all microorganisms were saprophytic (living on decaying vegetation) and that, after a suitable length of time in the vegetable soup, moved into a commensal (cooperative) relationship with humans.<sup>5,6,7</sup> At some point this relationship was no longer workable; either environmental changes forced the spirochete to further intrude upon its host, or natural radiation caused a genetic change. In either case the spirochete became pathogenic ("causing disease"). This evolutionary shift can also be understood with reference to Waddington's theory of biological cybernetics. This theory holds that the environment sets "problems" for an organism's phenotype, which causes the genotype (as a self-regulating, structural unit) to make adjustments in the phenotype. This, in turn, forces adaptation by the environment to

the new phenotype, which results in new "problems" for the organism to resolve. The evolutionary theory is thus dialectical and continuous. Furthermore, the environmental "problems" facing an organism can be either "natural" or "person-made", i. e., social. [v]

Hackett placed the first appearance of a pathogenic spirochete about 17,000 years ago, far enough back that embarrassing questions about what precisely caused it to become pathogenic in the first place couldn't possibly be answered, therefore making a fool of anyone who would dare to ask them. The first illness is known today as "pinta" (Spanish for "painted") and is a condition that can still be found in certain parts of the world. Pinta is primarily a childhood disease, is transmitted by skin contact alone, is never congenital, does not affect any of the internal organs, and manifests itself as a simple geographic macule—one or more patches of de-pigmented skin that make the body look like the coveralls of a sloppy painter.

About 5,000 years later, in the intensely warm and humid jungles of Afroasia, the first transformation took place, and a new treponemal infection appeared. "Yaws" (a West Indian colloquialism) is slightly more serious than pinta. It is still a childhood disease, is not congenital, is transmitted by surface skin contact only but, while not affecting internal organs such as the heart and brain, it can damage the boney tissue, especially that in the legs, resulting in a rickets-like handicap.

Some 8,000 years ago, a dramatic change occurred in the earth's climate. The last of the great ice ages was drawing to a close and, as the huge glacial masses retreated to the poles, large tracts of land rapidly changed from rain forest to desert, particularly the land mass we now call northern Africa. The spirochete, normally used to moist climates, was increasingly confronted with arid climates. Having come to rely on a medium of moisture, the spirochete retreated from the broader expanse of the body to more specific areas where a moist climate could be assured, i.e., the mouth, the armpits and the anogenital region. If we recall Waddington's cybernetic theory, any problem in the environment which causes a change in the phenotype must also include a change in the genotype. As the spirochete changed genotypically in response to the shifting climate, it also manifested itself as a new disease, one called "bejel". Bejel is an Arabic word meaning "bean-shaped", and the disease was named after the bean-shaped lesions which frequently formed around the mouth. The disease today is referred to as endemic syphilis. It is still primarily a childhood disease, is seldom congenital, is transmitted mainly through contact with the mouth or skin surfaces but, unlike either pinta or yaws, it is capable of doing some damage to the internal organs, and can cause tertiary skin lesions and buboes. (Buboes are formed when the lymph glands, particularly those in the groin and armpits, absorb infective organisms and swell.)

Further ratification of Hackett's environmental theory can be found in the Old Testament. Specifically, certain passages in the Old Testament describe a disease which many have since called leprosy. Leprosy, however, is not a congenital disease, which is perhaps the only way of distinguishing the ulcerations it produces from those of tertiary syphilis. Consider this Biblical passage from Deuteronomy 28:

The Lord will smite thee with the botch of Egypt, [even then they were blaming it on other nations] and with the emerods, and with the scab, and with the itch, whereof thou canst be healed. The Lord shall smite thee with madness, and blindness, and astonishment of heart. The Lord shall smite thee in the knees, and in the legs with a sore botch that cannot be healed, from the sole of thy foot unto the top of thy head. Then the Lord will make thy plagues wonderful, and the plagues of thy seed, even great plagues, and of long continuance, and sore sickness...

(my emphasis)

That this describes syphilis and not leprosy is evident from the reference to congenital infection. [vi]

While it is not describing leprosy, however, it is also not an accurate account of endemic syphilis. Only epidemic syphilis can, in its more progressive stages, cause the crippling insanity and heart disease referred to above as "madness and the astonishment of heart." It is therefore likely that, circa B.C., endemic syphilis ("bejel") underwent another change into a surprisingly more virulent form, known today as epidemic syphilis. Some researchers speculate that this transformation was largely brought about by changes in the social behaviour of people.<sup>8</sup> In general, as societies became



more formal in their control of human behaviours, especially sexual behaviour, it became more difficult for the spirochete to be assured of a way of hopping from one person to another. More clothes were being worn and regulations governing physical contact were coming into consensual existence. As Hudson commented, "...in a clean and clothe 'urbane' society, coitus has become the only contact of sufficient intimacy to ensure the transfer of treponemes."<sup>9</sup>

There were physical environmental changes, as well as social ones, that can account for the spirochete assuming a sexual mode of transmission. In particular, it is thought that the spirochete has difficulty surviving in cold, dry climates. As syphilis spread northward into Europe, it adopted a more exclusively genital preference where warmth, moisture and a method of transmission (barring universal celibacy) were guaranteed.

In recent years a few particularly assiduous scholars have attempted a reconciliation of the evolutionary theory (with its overwhelming amount of supportive evidence) to the one embarrassing shard of truth which the Columbian advocates use to demoralize the evolutionists: how does one account for the sudden presence of an extremely pernicious Pox during the 16th century, appearing almost from thin air? There is no simple answer to this query, although it can be argued that a new type of epidemic syphilis was responsible for Charles VIII's loss at Naples in 1494. Specifically, the last few decades of

the 15th century were rife with warfare, and with warfare there was mobility, relaxation of sexual mores and rape, all of which would abet disease transmission. It is theoretically possible that a quiescent spirochete, capitalizing on these "problematic" opportunities in its environment, underwent a rather sudden genotypic shift and re-emerged in epidemic splendour.

(Warfare, of course, was not confined to the 15th century, so the reason for the sudden Great Pox epidemic is still an inconclusive theoretical battle.)

Syphilis remained rampant in Europe and North America for the next several centuries. As recently as 1943 the reported incidence of syphilis was equal to that of gonorrhoea.<sup>10</sup> [vii] But with the re-discovery of penicillin in 1941 syphilis, the harbinger of death, was tamed in a starkly dramatic way. For a reason no one fully understands, the spirochete has not mustered any resistance to the antibiotics, and the widespread use of penicillin in the early 1950's virtually wiped syphilis out in North America.<sup>11</sup> Thousands of undetected cases of syphilis were cured as a bonus when a person took antibiotics for any of a myriad of other reasons. Syphilis today is infrequently seen; there were only 299 diagnosed cases in British Columbia in 1979.<sup>12</sup> A disturbing fear nonetheless remains that we could still experience a new mutation of the spirochete at any time and that, until a vaccine is discovered, we cannot consider ourselves free from the great potential for morbidity and mortality that syphilis contains.

## Part Two: Gonorrhoea

Although gonorrhoea's history may seem lacklustre when compared to that of syphilis, it is nonetheless a long one. The first record of the disease goes back over 5,000 years, when a Chinese Emperor (Hoang Ty) observed that:

Among the external diseases is one that is different from all others, the symptoms of which are easy to recognize: They are [1] infections of the urethra and vagina at the same time as the bladder, [2] drainage of corrupt materials white or red by the urethra or vagina. 13

There is little doubt that this is a description of gonorrhoea. The term, "gonorrhoea", is derived from a Greek word meaning "spilt seed", a confusion arising from the discharge's superficial resemblance to semen.

The Bible contains references to gonorrhoea, just it does to syphilis, although only one statement it makes has any anecdotal relevance to today. For centuries, and persisting even to the present, many people have feared that V.D. could be picked up from inanimate objects. One of the origins of this particular neurosis can be traced back to certain allegorical inaccuracies in the Bible:

...and everything whereon he sitteth [that hath the issue] shall be unclean. And he that sitteth on any thing whereon he sat that hath the issue shall be unclean. And what saddle soever he rideth upon that hath the issue shall be unclean.

(Leviticus XV, 4, 6, and 9. The "issue" is gonorrhoea.)

Gonorrhoea, according to the Bible, could be transmitted via a chair or horse saddle, and the seemingly eternal myth of drink-

ing glasses, doorknobs, towels and toilet seats was born! [viii]

In the middle of the 19th century two characters emerge—Napoleon, Emperor of Europe (or so he liked to call himself), and the ill-fated Lord Cardigan—whose involvement with gonorrhoea may have had the same level of historical consequence or literary inspiration as those countless rulers who were plagued with syphilis.

Napoleon suffered from what the French called "chaude pisse" which we North Americans call hot piss, burning urine or warm water, depending on our degree of prudery. In clinical parlance, Napoleon suffered from dysuria brought on by a urethral stricture—one of the complications of untreated gonorrhoea which many men developed during those centuries when gonorrhoea was untreatable. [ix] The stricken Napoleon came to abhor his long marches, finding them very painful. He took to riding in cushioned carriages and to providing himself with as many of the palace luxuries on his military treks as could humanly be carried by his soldiers. This insistence on comfort, and the likelihood that the constant pain clouded his judgement, may have been factors in his decision to press onwards towards Moscow only to be defeated by the fatal jaws of the Russian winter.

Lord Cardigan had the same malady, except the British preferred the more excruciating metaphor of "peeing broken glass". Despite the fact that Cardigan found it impossible to sit in the saddle of a horse his military pride and consciousness required that he do so. The piercing agony

he felt when he mounted to do battle during the Crimean campaign could well have caused him to order the "Charge of the Light Brigade!" as an expedient way to dismount as quickly as possible, regardless of the outcome.

Gonorrhoea has also been responsible for a few social customs. Since there was no truly effective cure for either gonorrhoea or syphilis until penicillin came along, many thousands of men infected with gonorrhoea were walking about with blockages in their urethras, unable to pee. Something had to be done or else the bladder was in danger of exploding. The solution was a catheter, a thin, metal tube that was hollow so that, when inserted up the urethra, it would separate the scar tissue and allow the urine to flow. But where could one keep the catheter? It would hardly do to wear it in one's top pocket for the holier-than-thou's to glare at accusingly. It had to be carried with discretion, but always within reach. One day a gentleman discovered that men had something else in common besides the ubiquitous dose: they all wore hats.

To accommodate the catheter, the hat had to be "elongated" and, although there is no clear documentation of "cause-effect", most of the early stovepipe hats all contained small inside pockets for the purpose of storing a catheter.

On a more serious note, if the widespread, somewhat uncontrolled use of penicillin in the 1950's unintentionally aided the battle against the spirochete, it apparently backfired with the gonococcus. Gonorrhoea today requires the most massive dose of penicillin of virtually all infectious diseases. Since the early 1950's, the dosage required has increased from 600,000 International Units (I.U.'s) of penicillin to a whopping 5,000,000 I.U.'s. There is speculation that, with millions of people receiving low doses of penicillin for a variety of minor complaints during the 1950's, all the weaker strains of gonorrhoea were unknowingly knocked out, leaving only the hardier strains. In effect, we may have compressed the normal process of natural selection for the gonococcus from a few millenia to a mere few decades.

There has been some concern in recent years that part of the responsibility for gonorrhoea's increased antibiotic resistance lies in the overuse of these drugs.<sup>[x]</sup> While antibiotics are now prescribed more cautiously in North America than they once were, chickens and pigs are still being sustained during their growing years on low-level maintenance doses of antibiotics. Every time we consume these products we are also consuming the residuals of these drugs. In many of the far Eastern countries, with the exception of the People's Republic of China, antibiotics continue to be used in fairly indiscriminate ways. These drugs are available over-the-counter and are often consumed for almost any ailment in the same fashion that our

society misuses acetylsalicylic (a.s.a.) products. In fact, it is even possible to get a prophylactic dose of penicillin from a vending machine in some of the "red-light" districts in Manila. Whether or not this is a good idea is moot; and there is a hitch: the clever entrepreneurs of the far East, like the clever entrepreneurs of the new West, exploited their market, in this case by selling antibiotic capsules that were only half or quarter filled and totally ineffective against gonorrhea. [xi]

The reported gonorrhea in North America today averages in excess of 400 cases per 100,000 population, and even this high figure is an unreliably low measure of its true incidence.

## FOOTNOTES TO CHAPTER ONE

- [i] Catherine the Great is reputed to have had a voracious sexual appetite and apparently bedded her entire Palace Guard during her reign. According to Wright, "she started the first hospital in the world for venereal disease, which had fifty beds, at St. Petersburg. In pursuance of her syphilophobia the lovers selected by her from the Army or in the course of social contacts had first to be passed by a committee of six women known as "les Epreuveuses", one of whom was a lady of good English family. After 3 months observation the lovers would be accepted only if approved by the committee on grounds of technique and if judged free from infection after examination by her Scottish doctor, Fergusson."  
A. Dickson Wright, "Venereal Disease Among the Great", British Journal of Venereal Diseases, 47(4), 1971.
- [ii] Recent historical leaders who some believe may have suffered syphilitic insanity include Adolf Hitler and Idi Amin.
- [iii] The name syphilis was given to the Pox by Giralamo Fracastor, a physician who first worked out the intricacies of contagion, in 1530. Syphilis was the name he gave to a shepherd in a poem he wrote, in which the unlucky lad was smitten with the Pox for making the gods angry. Etymologically, syphilis is a nonsense word that merely sounds Greek.
- [iv] The first reference to the "disease of Venus" actually goes back to the ancient Greeks, who thought that such ailments as discharges, dysuria and dyspareunia were caused by overindulgence in the carnal arts, which were under the aegis of Venus and Eros (the latter being the "god" of sexual love). What if John Astruc had been a woman? Would we have called these diseases "erotic disease", or E.D. for short?
- [v] For more discussion of this cybernetic (or "structural") model of evolution, see Jean Piaget, Structuralism, Basic Books, New York, 1970; especially Chapter 10, "Organic Structures".  
One interesting theory of genetic structures argues that the gene pattern of an organism is a formal arrangement in which biochemical "messages" or "conversations" take place between the genes. If environmental stress required an adaptive change in the phenotype, it is conceivable that the requisite change in the genotype does not have to be a re-arrangement of the genetic structure. It



could be as simple as a minor shift in how (or in which order) the genes "talk" to each other, i.e., their biochemical sequence. Thus, two organisms with virtually identical genotypes could cause two quite different diseases (as in the case of the treponematoses) by altering the pattern of communication between the genes. For more information on this subject, see: Howard Pattee, editor, Hierarchy Theory: The Challenge of Complex Systems, George Braziller, New York, 1973; especially Chapter Two, "Hierarchical Order and Neogenesis" by Clifford Grobstein, and Chapter Three, "Hierarchical Control Programs in Biological Development" by James Bonner.

- [vi] There is still a confound: although leprosy is not congenital, it is infectious and whole families (and their offspring) may contract the disease. While this obscures the precise cause of the disease referred to in the Biblical passage, Rosebury has commented that, respecting the origins of syphilis, "it is not proof we look for, but plausibility..."  
Theodor Rosebury, Microbes and Morals, Ballantine Books, 1973. p.88.
- [vii] It will later be argued that gonorrhoea was underreported. The incidence of syphilis just forty years ago was none the less substantially greater than it is today.
- [viii] This belief, of course, has also been sustained by a sexual double standard. It is logical to presume that men, when confronted on their infidelity as manifested by a dose, would plead that it came from the local pub's john.
- [ix] Not that treatment in the preceding centuries wasn't attempted. There used to be a popular medieval saying: five minutes in the arms of Venus, five years in the hands of Mercury. Steaming sitz baths or mercury vats did not cure the disease. They merely made the sick person so completely miserable and totally poisoned that the original malady faded into triviality. Iatrogenesis (physician-induced illness) may well be as old as medical practice itself!

[x] It is appropriate to regard a great deal of antibiotic use as unnecessary, since many of the symptoms for which it is taken are caused by organisms which may not respond to antibiotics. I have had a personal experience with a Vancouver physician who gave me a prescription for tetracycline and said, "If your symptoms don't go away then at least we'll know what the cause isn't," thereby using drug therapy as part of a differential diagnosis. The danger inherent in this practice (and in the vending machine example) lies in confronting an organism with drug amounts sufficient to alter its functioning but insufficient to kill it, possibly aiding in beefing up the organism's antibiotic resistance.

[xi] While the politics of medical care (including antibiotic use) in second and third world countries are complicated and volatile, it remains true that the excessive antibiotic use in many of them may reduce antibiotic effectiveness in the future. For example, two different strains of penicillinase-producing *N. gonorrhoea* (PPNG), capable of neutralizing completely the effect of penicillin, developed in the Phillipines and the Ivory Coast of Africa—two countries with notorious lack of pharmaceutical control. See:  
C. Wilson, et al, "Increased Antibiotic Resistance of *Neisseria Gonorrhoea* in Korea", Anti-microbiological Agents and Chemotherapy, 9(4): 716-718, April 1978;  
P. Perine, et al, "Evidence for Two Distinct Types of Penicillinase-producing *N. Gonorrhoea*", Lancet, 11 (8046): 993-995, November, 1977;  
P. Piot, "Resistant Gonococcus from the Ivory Coast", Lancet, 1 (8016): 857, April, 1977.

CHAPTER TWO

Of Diseases, Demons and Scientific Veneers:

The Art of Blaming the Victim

"My boy, if there were no disease in the world, there would be no decency. The fear of God. Our illness is a sign of the disapproval of God for what we did."

Army chaplain to private on the subject of venereal disease, from the novel, The Gallery, by John Horne Burns, 1947

Part One: V.D.. Punishment and Sin

Just as most cultures ascribed unexplained phenomena to supernatural forces until naturalistic (i.e., "scientific") explanations were formulated and tested out, so, too, were diseases considered the workings of deities until the process of contagion and the possibility of germs were discovered. [i]

In the theocratic state of the ancient Hebrews, Yahweh was conceived as a paternalistic deity, alternating between fatherly protectiveness and vengeful punishment. Disease in the Old Testament was almost invariably the result of one thing—the wrath of God. While such a view may have worked well in keeping the fear of God alive in the hearts of His servants, it wasn't a particularly useful disease-intervention strategy. There are many Biblical stories describing disease as punishment for sinning. In particular, whenever the Chosen Ones began messing around with other gods (notably phallic worship), the Lord would "smite them with emerods in their private parts" which, translated into contemporary street language, means that He gave a dose to the Ones he loved most. [ii]

The notion of diseases as punishment consequent to moral transgressions persisted in Christianity throughout the centuries. The father of Christian dogma, Augustine, for example, wrote that "all diseases of Christians are to be ascribed to demons."<sup>14</sup> As with many other beliefs, another tenet of Christianity was that of original sin, which further confused

the nature of disease. According to Bede the Venerable, dedicated historian of the early days of the Church in England, Augustine (when Bishop of England) wrote to Pope Gregory in 597 A.D., enquiring whether or not sex for procreation was sinful. The Pope replied to the effect that "in sin was I conceived, in sin was I born."<sup>15</sup> Sexual behaviour became ever more linked to a state of sin. [iii]

During the middle ages, men and women who, with the exception of nobility and their court, had little pleasure open to them except sex, found themselves condemned for the very act that, ironically, also served to maintain the privileged power of the Church and the monarchy by creating the next generation of church-goers, tax-payers and peasants. Caught in the double bind, as it were, these lusty peasants often took to the woods by night and engaged in mass couplings of baachanalian dimensions. These hedonistic outbursts no doubt aided the spread of V.D. and, as no one contracting a disease in this manner would confess to it, even limited attempts at control were virtually non-existent. For posterity's sake, the history books of the period, kept diligently by learned monks, referred to the peasants' simple debauchery as satanism, and to the peasants themselves as witches and warlocks. The web of sin, demons and punishment continued to spin itself around disease. [iv]

By the 18th century scientific enquiry had begun to take some of the devils out of disease. Not surprisingly, venereal disease managed to get left out. John Astruc, the physician with the gall to blame the whole mess on Venus, wrote in the mid-1700's:

That the Venereal Disease was sent into the World by the Disposition of Providence, either to restrain as with a Bridle, the unruly Passions of a sensual Appetite, or as a Scourge to correct the Gratification of them, is an Opinion highly probable...16

To Astruc, V.D. was a "severe Wickedness" and the stricken souls should hide in shame. He lamented, at the same time, that so few people sought treatment, but that's not hard to understand considering that his condemning attitude was taken, in his days, to be an enlightened one.

Even a century later, in 1869, the only word the French physician, Lanceraux, could find to describe V.D. was "evil" which, by association, also made his patients evil.<sup>17</sup> Such a morality was not without its toll in human tragedy. Consider the fate of the 18th century writer and critic, James Boswell, who succumbed to his sexual urges and, as a result, according to his official biographer:

...was a man trapped by forces beyond his control, his motives deeper than his insight, driven to a life of chronic anxiety, ridden by a continuing sense of guilt and need for punishment, intemperate and incontinent, impairing his manhood by courting (and receiving) venereal disease in expiation, and finally dying of its sequelae.<sup>18</sup>

Although effective treatment for V.D. didn't exist at this time, the condom was developed sometime during the 18th century as a prophylactic device<sup>19</sup> and non-moralistic advice on sexual behaviour could have been undertaken.<sup>[v]</sup> The disease, however, was regarded with such moral loathing that when liberal-minded physicians in Denmark in 1788 attempted to open a "free V.D. clinic", they found themselves:

...faced by more than a hundred men, armed with heavy flails, foaming with rage and threatening us; if we did not leave their women and children alone, they told us, they would do violence to us. So we had to content ourselves with those who submitted to the treatment of their own free will. In this way, the disease will never be eradicated.<sup>20</sup>

By the end of the 19th century, this heritage of guilt and sin began to be criticized. In Brioux's play, "Les Avariés" (which is superficially concerned with syphilitic insanity), the physician delivers a diatribe against the Victorian stuffed-shirts:

This disease is like other diseases; it is one of our afflictions. There is no shame in being wretched—even if one deserves to be so. Come, come, let us have a little plain speaking! I should like to know how many of these rigid moralists, who are so shocked with their middle-class prudery that they dare not mention the name, syphilis, or when they bring themselves to speak of it do so with expressions of every sort of disgust, and treat its victims as criminals, have never run the risk of contracting it themselves? <sup>21</sup>

Part Two: Modern Intolerance—Nationalism, Racism and Misogyny

By the turn of this century morality was no longer equated with fire and brimstone, and the notion of original sin began to fade somewhat. Religious morality did not disappear with the diminishing political power of the Church, however, it merely changed bosses and became secularized. Governments, rapidly increasing in size and power since the massive industrialization of the late 19th century, became the new moral arbitrators, and nationalism became the new moral passion that could serve the same purposes of social control for which religious doctrines had once been manipulated.

This new nationalism, spurred on by the two great wars, was also mixed in with a dash of racial prejudice. Not only was it un-Canadian, un-American (or un-whatever) to have V.D.; anyone who wasn't a real true-blue American—that is, anyone who wasn't white, anglo-saxon, protestant and male—was immediately suspect of being "dirty". Dr. Parran, Surgeon-General of the United States just prior to World War Two, tells this story about a certain Mr. Blank who admonished him for bringing up the issue of syphilis at a dinner-speech:

There may be a good deal of it, as you say, but take my word, you'll find these filthy Europeans brought it over, along with communism. Now, my great-great-grandfather fought on the CONSTITUTION: able-bodied seaman, died of his wounds after the battle with the GUERRIERE. Line comes right on down. Clean American stock. Why should my wife and daughter have to listen to nauseating details about this horrible disease and why should I shell out good tax money to take care of



the reprobates who have it? Ship 'em back to Europe where they belong! 22

Unfortunately for Mr. Blank, he would have been one of his own first victims, for as Dr. Parran later found:

...one of the names on the list of the CONSTITUTION'S ship's surgeon was that of great-great-grandfather Blank, who had required treatment for a particularly syphilitic ulcer! 23

The view that V.D. was an un-American activity in the same league as communism is epitomized by this anecdote from The Gallery, a World War Two novel by John Burns. It concerns a hapless soldier seeking treatment for a dose:

"So you got burned?" the major said. "And you'll be losing those three stripes too."

"Yessir."

"I don't say: Welcome to our hospital. You're not going to have a good time here. Our whole setup is guaranteed to make you hate everything about us. We don't want men coming back here, do you see? There's no excuse for getting V.D. No excuse whatever. We give you treatment here, but we do it in such a way that you won't care to come back as a repeater..." 24

The reference concerning the loss of "those three stripes" relates to the Army policy of considering V.D. a "crime" (the secular equivalent in many ways to the religious concept of sin.) Infected Army men, prior to World War Two, were deprived of their pay, and officers lost their commissions.<sup>25</sup> Even in 1969 this heavy-handed legacy persisted as Dr. L. Nathan, a military physician in Vietnam, noted "that many serviceman at home and abroad tend to avoid military physicians when they suspect they have V.D."<sup>26</sup>

The punitive undercurrent to military treatment of V.D. also predominated in the larger society, sometimes subtly, often blatantly. For example, the unpopularly enlightened Dr. Parran wrote in the 1940's that physicians must "learn to think of syphilis scientifically as a dangerous communicable disease, which it is; rather than moralistically as a punishment for sin, which it often is not."<sup>27</sup> Although Parran acknowledges that syphilis is often not a punishment for sin, he still hedges his bets against Augustine and leaves the door open to the possibility that, at least some of time, syphilitically infected persons are, indeed, sinners suffering their penance.

A more obvious moral connection was drawn by Dr. Downing who, in the 1950's boom of penicillin therapy and the drop in V.D. incidence, reminisced about earlier decades in which V.D. treatment with Ehrlich's "606" compound of arsenic and bismuth lasted at least 18 months:

...with the advent of penicillin and its short-term treatment, whatever fear the amateur had of long and arduous treatment lasting for a year and a half was completely dissipated. Whatever effect the arsenical and bismuth era had in preventing sexual promiscuity no longer exists. Promiscuity in this country is on the increase. 28

This passage is interesting for several reasons. First, it typifies a hidden bias that has existed until only recently in V.D. Control programs, i.e., that a major intent of Control agencies, physicians, clergy and the like has often been to proscribe sexual mores and behaviour, with the fear of V.D. providing a valid, if usually distorted, pretext. I have

encountered the same sentiment among some health professionals in this province within just the past four years, particularly with reference to gay men and the "steam bath" phenomenon. Higher syphilis rates among gay men and the number of anonymous partners encountered in an evening at a bath has occasionally been used to support a person's belief that homosexuality is wrong and that homosexuals are "mixed up" or "emotionally disturbed."

This tendency to use V.D. as the big stick with which to keep morals from crumbling is still lent credibility in professional journals. In 1974, for example, the American Medical Association published its policy on V.D., recommending such preventive strategies as:

1. Fidelity and continence in married couples.
2. Abstinence by unmarried couples. 29

In 1977, the Director of Professional Affairs for the Canadian Medical Association demonstrated a similar logical distortion:

We are advised by media advertising that...it is now "wrong" for an individual to have inhibitions..... Add to this libertarianism the plethora of oral contraceptives and the availability of antibiotics and it is easy to see why V.D. is often regarded by those infected as just a nuisance. Less than three generations ago V.D. was considered a disaster and a stigma; now it is looked upon as no more inconvenient than the common cold.....It is no wonder that society is faced with a rising rate of V.D.; perhaps one should be surprised that the rate is not higher if the morals of today are given close scrutiny.....60% of all [V.D.] occurs in people under the age of 24 years. Prostitutes flourish, in spite of the increasing number of enthusiastic amateurs...in some metropolitan centres the infection rate among homosexuals is 30%. 30.

It is interesting that, despite the fact that figures and

pronouncements are liberally tossed about, the above passage does not cite one single reference to justify its claims. Time and again, it seems, the credibility and power of the "scientific" medical profession and the "scourge of V.D." entwine to promulgate stereotypic sexual norms. In a wrap-up address to a significantly large, International Conference on Sexually Transmissible Diseases, held in London in June of 1975, Dr. Ambrose (an eminently respected venereologist) stated:

I believe it is wrong to teach the young that there is no harm in indulging in sexual activity providing that they avoid pregnancy and venereal disease. I believe it is right to appeal to their idealism, to try to convince them that self-restraint is essential in this life, and the road to happiness and freedom lies in the ideals of love, marriage and the family. 31

An interesting feature of two of the above passages is their use of the word "amateur" which first began to appear in V.D. literature during the 1950's and 1960's. This term was applied to women who engaged in sexual contact with a number of men (rather than with just one) to distinguish them from "pros" who presumably had the good sense to charge for it! A 1966 pamphlet reiterated this theme under the heading, "Main Sources of Infection":

In the past, prostitutes were the main source of infection. Today, the "good time girl" is equally as dangerous. Interested only in a good time, she frequents restaurants, dance halls and night spots looking for a "pick-up". Although they do not charge money for their favours, the cost can be very great to a person that becomes infected. [vi]

Ever since John Astruc's time (and probably much earlier) women have been held responsible for V.D. In all of the

epidemic pyramids that I have seen, for instance, the person at the top, the origin of that particular chain of infection, has been a woman:

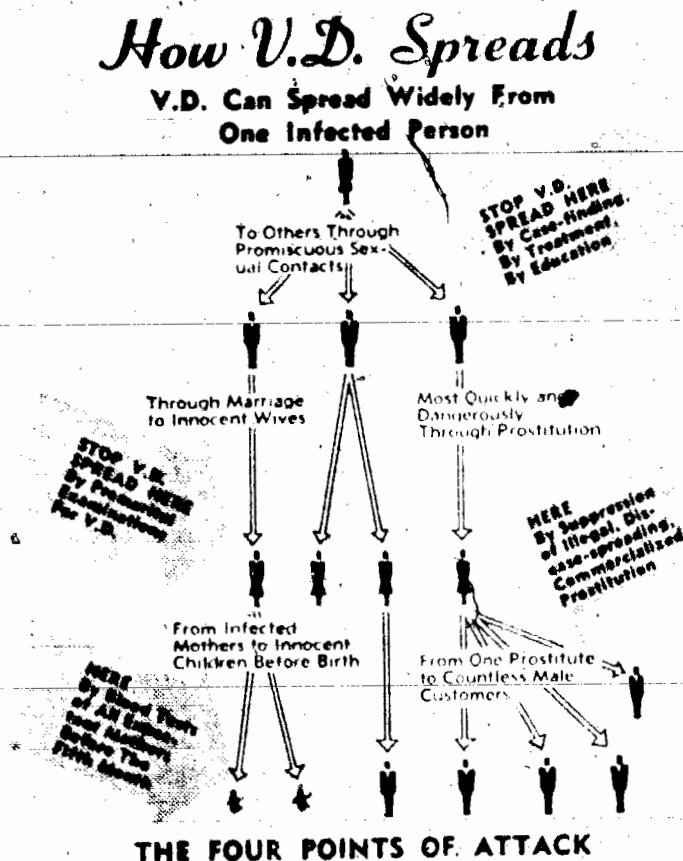


ILLUSTRATION 2: The V.D. Pyramid with a Woman at the Top (source: undated [late 1950's] untitled B.C. Health Dept. pamphlet)

Almost all V.D. literature has been directed towards men and has consequently assumed that the source of infection is a female, abetted by the ubiquitous "demon rum" and its abilities to throw conventional—and presumably superior—sexual morality into a degenerating tailspin. From a B.C. pamphlet, circa late 1950's:

Promiscuous sexual contact is the great spreader of V.D. Much V.D. is caught by foolish chances taken when judgement is impaired by drinking. Liquor, women and V.D. is a common association. Pollution with V.D. in communities arises from unsavory community conditions. This pollution comes from red light districts, brothels, and certain hotels, beer-parlours, dance-halls, taxicab companies, restaurants, and rooming-houses.

Even as recently as 1976 an American pamphlet blandly stated as fact that "in Western countries, the "amateur" contact ("promiscuity for pleasure") is becoming the major source of infection."

The misogynist bias of V.D. literature is most apparent in the manner with which prostitutes are regarded as "breeders" of V.D. Whole pamphlets have been devoted to stamping out prostitution as the way to end the V.D. epidemic.<sup>32</sup> Other V.D. pamphlets casually mention that "75% of prostitutes are infected with syphilis or gonorrhoea or both [sic] at any given time." (Alberta pamphlet, "V.D.—The Enemy Within", no date, circa 1955) In the mid-60's in British Columbia a colorful plastic mounted poster of a woman leaning against a lamppost boldly declared: 4 out 5 pickups have V.D. [vii] At the time the Director of the Division of V.D. Control knew from his own jail statistics that only approximately 18% of prostitutes—much less pickups—were infected with V.D. When queried as to the discrepancy, the Director replied to the effect that "it was simply a well-meant exaggeration to caution people [i.e., men] to avoid V.D."<sup>33</sup> Once more, V.D. was used as a bat to strike away at sexual indiscretions; once more, women were perceived as party to the "V.D. threat".

ILLUSTRATION 3: 4 out of 5 pickups have V.D.

4  
OUT OF  
5  
PICKUPS HAVE  
V.D.



*guard your*  
**HEALTH**

PRODUCED BY HEALTH BRANCH  
Department of Health Services and Hospital Insurance  
Victoria, B.C.

HON. ERIC MARTIN,  
MINISTER

J. A. TAYLOR, B.A., M.D., D.P.H.,  
DEPUTY MINISTER

**Have you any doubts?**

**See your doctor or your local health department.**

# *Has he infected you?*

# V.D.



## **YOU MAY NOT KNOW IT**

*See your Doctor or your Local Health Department*

PRODUCED BY HEALTH BRANCH  
Department of Health Services and Hospital Insurance  
Victoria, B.C.

DESIGNED BY ERIC MARTIN  
ARTWORK BY J. A. TAYLOR

ILLUSTRATION 4: Has he infected you?  
(source: 1966 B.C. Health Dept. poster)



A follow-up poster was immediately issued to appease the public hostility of a nascent women's movement in B.C. This poster portrayed a troubled-looking woman with a shadowy male in the background and the copy: Has he infected you? This is the obverse to the woman as whore: the woman as innocent wife. Until recently in the V.D. literature, women were regarded as either prostitutes or loose (and source of the epidemic) or as wives and mothers (who, like babies, were the innocent victims of V.D.) It is significant to note that this portrayal existed largely because men, rather than women, were seen as having a V.D. problem, because men, rather than women, were the professionals in charge of solving the problem. As far back as 1919, women have commented on this disparity: "It is a curious coincidence that synchronously with the advent of women in medicine, reason instead of prejudice began to govern the treatment of venereal disease and the inclination on the part of the profession to excuse masculine promiscuity on the pleas of sexual necessity began to disappear."<sup>34</sup> In the V.D. dichotomy of women as corrupt or innocent, all male responsibility is exonerated. Men are merely the carriers of an infection spawned by corrupt women which will ultimately taint innocent women.

Finally, for the sake of a little levity, let's consider use of the term "promiscuous" in many of the passages so far quoted. Promiscuity possesses a simple dictionary meaning of "having more than one sex partner", but its moral connotations

and its use as a pronouncement of judgement would render it a more apt definition of "having one more sex partner than whoever it is using the term." In other words, while promiscuity is a word frequently encountered in both professional V.D. literature and in general pamphlets, it is a term devoid of any consensual meaning and, hence, any usefulness.

While the moral overtones in V.D. literature have been slowly muted, they have certainly not been eradicated. Demons may no longer cause disease, but prevention necessarily entails living the life of a saint, presumably St. Augustine. Although it has been known for centuries that the condom provides a good barrier to disease transmission, almost all V.D. pamphlets of the past twenty to thirty years fail to mention its prophylactic use and, instead, rely in promoting "wholesome" behaviour as the deterrent to disease. From a 1966 pamphlet, replete with cartoons of football, skiing, hockey, swimming and tennis:

HEALTHY RECREATION IS A SAFEGUARD.  
Participation in sports and hobbies with good companions is a help in avoiding V.D. infection.

Idle hands are the devil's tools! From another pamphlet of the same era:

What can you do to protect yourself from venereal disease? Practice good moral conduct. Avoid promiscuity. Group activities—sports, music, drama and other recreational activities sponsored by school, church or community are healthy alternatives to prevalent practices of too-early dating, going steady and pairing off under conditions which favor sexual intimacy.

And this pamphlet was available from National Health and Welfare until just a few years ago!

It should be obvious by this time that V.D. information has functioned more to enforce a sexual code of behaviour than it has to adequately equip people with the information they require to, if not avoid V.D., then at least prevent its morbid sequelae. The sexual code being preserved has been that of simple, strict monogamy:

Young people must realize that there is danger in any sex contact which is outside of healthy marriage; and, of course, healthy marriage, among other things, means knowledge by husband and wife that they are both free from these diseases. 35

The family, in turn, is scape-goated for errant children's behaviour:

Our research [never cited] in adolescent sexual behaviour suggests that the promiscuity which almost always leads to V.D. is much less likely to occur in children who feel secure in their family and social relationships and who have clear-cut goals in life. 36

As recently as 1972, the primacy of monogamous sexual behaviour and V.D. control was emphasized by a New York social worker in a book on V.D. for teenagers:

At present, the only effective prevention of V.D. is through changes in sexual behaviour, increased understanding of the diseases, and establishment of goals that make possible postponement of premarital and extramarital sexual experimentation. 37

Unfortunately, the author never lets us in on when such a postponement ends.

Finally, our attitudes toward the control and prevention of V.D. over the centuries had been best summarized by Theodor Rosebury:

In the absence of anything better to tell the young, we keep repeating the old injunction against sex before or outside of marriage. The argument is phrased differently today and accompanied by a little more patient information and fewer blood-curdling threats; but there has been no basic change. It is a legacy tracing back through puritanism to the doctrine of original sin and beyond. The idea has no roots in hygiene or in a knowledge of human behaviour. Maybe for that reason—or whatever reason—the prohibition has never worked. 38

### Part Three: Devils in Scientists' Smocks

In the preceding sections of this chapter, a cursory perusal of literary references to V.D., both ancient and modern, indicated that the disease has often been explicitly or implicitly tainted with a monochromatic religious brush: V.D. as symptom of moral contravention, degeneracy and, specifically, sexual indiscretion. People with V.D. were consequently victimized with the stigma that, through their own immoral behaviour, they were responsible for their illness. Treatment may well have killed the infecting organism, but since the organism's presence was only a symbol of a larger sickness, new and better methods of treatment had to be accompanied by moral education. Ultimately, the disease only represented social and moral ills.

The religious structure which was heavily responsible for inculcating such a punitive analysis began losing much of its direct hold on social behaviour during this century. It was earlier mentioned that the state and nationalism began to emerge as a new "religion" independent of the hell and brimstone threats. At the same time, the movement of philosophical rationalism that had re-emerged in the Renaissance several centuries earlier (and which had since been codified under a number of disciplines utilizing a "scientific method") began to focus on social and individual behaviours. Sociology slowly carved out a niche for itself in the list of scientific topics

in the latter half of the 19th century, and psychology/psychiatry were quick to follow suit.

One could naively assume that the scientific method, with its cornerstone of logical-empiricism, might have cast out the last demons from disease. This was not the case. While V.D. researchers and program directors no longer invoked moral degeneracy as the prime cause of venereal disease, they still sought out indicators that would isolate individual or social characteristics of V.D. infected persons that would explain the presence of disease. Such an approach is not intrinsically in error when considering preventive or interventive strategies. Unfortunately, most of the psycho-social research (and especially much of the current editorial statements of professionals on V.D.) retains the same judgemental biases of the religious system which preceded it. In other words, the majority of today's psycho-social theories of V.D. are little more than a new jig to an old tune: people get these diseases because they deserve them, and people who deserve them get them. Prejudicial morality did not vanish; it became secularized within scientific abstraction. Whereas in the past it was "immorality" that distinguished these people from the rest, today it is "abnormality": e.g., neuroticism, maladaptive lifestyles, personality defects, impoverished upbringing, delinquency, and so on.

Roughly speaking, this new version of "enlightened" research can be divided into two streams: psychological and

sociological. Psychological theories attempt to explain sexually transmitted diseases (S.T.D.)<sup>[viii]</sup> as an outcome of personal characteristics that cause an individual to behave inappropriately, i.e., to engage in a pattern of sexual activity that would invariably lead to an infection. The paradigm of this theory argues that a person may have a "neurotic dependency need" and will attempt to overcome this by engaging in sexual activity with a large number of similarly "unreliable" personality types. Sociological theories, on the other hand, step back a foot or two and try to argue that increasing S.T.D. rates are simply a sign of a greater overall collapse in our society's structure and value systems. Once again, the presumption is that certain sexual behavioural changes have occurred which place more people at risk of infection. A common sociological paradigm is the "3 P's" theory: promiscuity, permissiveness and the Pill.

There is a touch of truth in both approaches. Both, however, grossly oversimplify the problem and their assumptions are often based on bad research design, poor interpretation and a refusal to examine other possible explanations for present S.T.D. epidemic levels. Nevertheless, they continue to exert a great deal of influence on both S.T.D. information and control programs, and it is worthwhile to examine some of the research upon which these psycho-social theories are based, to expose their fallacies.

#### A. PSYCHOLOGICAL DIMENSIONS

The first major undertaking into the "psychology" of S.T.D. occurred in 1945, when Watts and Wilson<sup>39</sup> studied a large number of American soldiers who had contracted an infection. The authors found that infected soldiers were twice as likely to have grown up in an abnormal childhood environment, and attributed their infections to the abnormality of their past, viz. because of their past they behaved in abnormal or deviant ways that placed them at great risk of contracting S.T.D. Beyond the problem of placing behavioural effect in early environmental experiences, the authors were never clear on their definition of abnormality. Nor did they describe the "chronic emotional and intelligence handicaps" which they discovered in some 95% of the S.T.D. infected men, and which they felt limited these men's usefulness to the army. This research model, which became a paradigm of many following studies, essentially viewed S.T.D. infection as symptomatic of some other, larger personal ill.

Another study was conducted in the same year by Weitz and Rachlin<sup>40</sup>, in which five hundred women who had been treated for S.T.D. in a hospital were tested for intelligence. None had volunteered for treatment. The authors found that most of these women were "mentally defective" based on the fact that they had lower than average I.Q. scores. They



They also recommended that all S.T.D. patients be removed from "social circulation"—a "scientifically" argued return to the lock hospital concept of the late 19th century. They reasoned that lower intelligence necessarily led to sexual promiscuity which, in turn, led to S.T.D. infections. Apart from the fact that this is circular reasoning at its worst (S.T.D. patients have low intelligence, hence low intelligence leads to S.T.D.) and that the validity of I.Q. tests is now being challenged, the conclusion that all infected persons should be removed from social circulation based on the findings of one, small, coerced sample (hardly representative of the entire population) is quite astounding. This study, however, had a lasting impact. Until recently, a popular S.T.D. myth was that intelligent people were immune, whereas school drop-outs would become infected. [ix]

More recent research, utilizing essentially the same technique of testing S.T.D. clinic populations, has found differences in neuroticism and introversion/extroversion between patients and controls, with the former demonstrating a greater degree of socially maladaptive personality traits. S.T.D. infections are regarded by these researchers as a sign of personality disturbance requiring professional counselling therapy, and these studies generally conclude with the recommendation that psychiatrists or psychologists be part of the S.T.D. "team" so that the underlying problem can be

eliminated. The pattern of this research, then, has been to test a captive clinic audience of S.T.D. patients, discover psychological differences between them and a random sampling of the general population, and attribute the presence of disease to those differences by arguing or implying that a particular psychological deviancy leads to promiscuous "risk" behaviour.

Several other studies, however, have found no difference between S.T.D. patients and randomly selected populations.<sup>43-5</sup> The contrariness of these findings might be attributable, in part, to the confounds of the deviancy → sexual promiscuity → disease equation outlined above, and to the confusion that exists regarding the concept of personality traits which these studies attempt to measure.

Personality theory, whether it fixes traits as genetically determined or shaped by early childhood experiences, generally maintains that a person's psychological make-up, once formed, is static. Personality inventory tests have been developed to measure this make-up, and a number of sophisticated scales have been designed to classify human beings and, hence, human behaviour. Some of these scales may have interesting application as tools in describing behaviour patterns, yet they have most commonly been used to explain why behaviour occurs and to thus predict a person's future behaviour. Such a use is dependent on the notion of a static personality trait, a notion which has never been validated. As such, personality traits and measurement tests are, at best, interesting games of speculation and, at worst, devices which can obscure the

reality of social events. [ x ] For example, the standard personality test in an S.T.D. clinic is a pen and paper questionnaire presumed to elicit such traits as insecurity and poor self-image (i.e., neuroticism and introversion). In the social context of an S.T.D. clinic waiting room, however, there are "demand characteristics" which would literally force the respondent to deviate from the norm. For instance, how "normal" is it for a person to be in an S.T.D. clinic with a researcher requesting that she or he fill in some elaborate psychological test on deviancy? The stigma of impunity still enshrouding S.T.D., the fact that it has led clinics to adopt a policy of complete patient anonymity (patients are usually called by numbers rather than names) and the probability that the questionnaire respondent has a disease about which she or he has only learned mystifying half-truths should surely caution any researcher on the logical foibles of generalizing any personality trait findings outside the context of S.T.D. clinic waiting rooms!

This "demand confound" was central to Starck-Romanus,<sup>46</sup> criticism of such personality findings. That S.T.D. patients are more likely at times to suffer social maladjustment, personality defects and so on than are their controls is not valid information, because such findings were based on a small sample of young people treated at special S.T.D. clinics in large cities during the years when there was not an overly enlightened attitude towards these diseases. Still another study<sup>47</sup> found that less than ten per cent of a large sample of S.T.D. patients suffered any psychiatric disturbances, and that these

disturbances were almost exclusively mild depression brought on by the enormous fears engendered by anti-V.D. propaganda and the heavy, implicitly moral approach to the subject. In other words, instead of psychologically abnormal people getting S.T.D., one might hypothesize with equal (if not greater) validity that it has been our social attitudes towards these diseases which have turned normal people who did get S.T.D. into temporarily neurotic, guilt-ridden depressives.

In sum, psychological theories have been party to the same victim-blaming process shared by religious and secular moralities: that of attributing the presence of disease not to the infectious nature of the organism so much as to individual characteristics that compel people to behave in implicitly irresponsible ways. S.T.D. patients, in turn, are normal only when they suffer some form of guilt, neurosis or psychic scarring from their experience, as the following 1976 paper on health education and S.T.D. demonstrates:

I do not believe that the majority of people professionally concerned with medical and social problems [such as S.T.D.] share as a personal attitude the sort of moral indifference expressed by the teenager who said: "I cannot feel guilty or ashamed about having gonorrhoea because I have done something completely natural like just to sleep with somebody..." 48

B. SOCIOLOGICAL DIMENSIONS

In 1965 the World Health Organization came up with eight societal factors which it thought correlated to the epidemic incidence of S.T.D.<sup>49</sup> These included a general ignorance of the disease, lack of home discipline, failure of fear as a

deterrent force, an emphasis on sexuality in the communication media, earlier physical development, and the misinterpretation of psychological teaching leading to more permissiveness. It is logical to assume that earlier physical development, by giving rise to earlier sexual development and increases in the sexually active population, could increase S.T.D. rates, just as lack of public information could hinder many infected persons from seeking treatment. An emphasis on sexuality in the media—particularly one that ignored the realities of both contraception and S.T.D.—could also contribute to higher disease rates. But the remainder of the WHO list is contentious and can be summed up as the prevailing 3 P's postulate of promiscuity, permissiveness and the Pill. The 3 P's theory assumes that any increase in sexual behaviour leads to increased S.T.D. rates, and is more casual ("permissive") and less moral ("promiscuous") than older patterns of sexual behaviour. People are not afraid enough of infection to be chaste; women are rejecting sexual double-standards and are no longer monogamous. This latter point (implicit in all sociological theories of S.T.D.) reminds me of what Lord William Acton, a British peer, physician and grade-A misogynist, wrote last century: "Thank God women have no sexual feelings, otherwise the world would be nothing but a brothel."

Lists similar to that of WHO have been drawn up by other authors. Catterall<sup>50</sup> attributed increasing S.T.D. rates to radical changes in sexual behaviour (i.e., promiscuity),

increased mobility, packaged holidays, antisocial behaviour, the Pill and resistant gonococcal strains (the only non-social factor in his index.) It's amusing to note that Catterall considers antisocial behaviour a "cause" of S.T.D. This makes promiscuity a form of antisocial behaviour yet, to my mind, it should be considered very social. Furthermore, it is a classic example of stipulating a definition and then using it to define itself. In this case promiscuity is said to be antisocial, and antisocial behaviour is said to be a cause of promiscuity.

Mead<sup>51</sup>, on the other hand, went a step further than Catterall and linked S.T.D. rates to behaviours consequent to social degeneration and alienation, placing S.T.D. into a list of "special social problems" which also included delinquency, drug abuse, violence, apathy and social upheaval. There is no statistical data to support either Mead's or Catterall's litanies, or of the one put forward by WHO in 1965. In fact, Mead's list is especially curious. Four of the six "special social problems" are descriptions of fairly abstract concepts (delinquency, violence, apathy and social upheaval) which have no objective meaning apart from the one imputed by the observer. His fifth factor, drug abuse, while not an abstraction of the same order because it involves specific behaviours that can be monitored, is nonetheless wobbly: when does use become abuse? His list appears a little like the Sesame Street game: five of these things are like each other, one of these is not. Clearly

S.T.D. is the odd one out. It has a particular etiology and specific treatment interventions. It is included in Mead's list for the same reasons the WHO and Catterall constructed theirs: an assumption that variations in sexual behaviour can account for increasing S.T.D. rates. But how true is this? Does the number of sexual partners one has really increase the risks of S.T.D. infection?

Darrow<sup>52, 53</sup> set out to answer this question and discovered that those patients who named six or more different partners in the previous month had a 33% lower incidence of gonorrhoea than those who named only two to four steady partners. The number involved in the study, admittedly, were disproportionate (1,379 "single partner" persons compared to only 25 "six or more" persons) and not statistically significant. Nonetheless, it provides some evidence that a simple correlation between the number of sexual partners and the incidence of gonorrhoea does not exist.

Further support for this argument can be found in a study by Noble etal<sup>54</sup> in which "promiscuity" was not a factor in recidivism in three out of four experimental groups. Henderson<sup>55</sup>, in an article on health services for gay men, suggested that "having multiple sex partners is not a significant risk factor. [While] a person with a large number of sex partners will usually be at a higher risk from acquiring a sexually transmitted infection than a person with a smaller number... the risk is not related to the numbers so much as it is to

the nature of those partners." Although there is no hard data to support this belief, it is one grounded on the notion of an "asymptomatic reservoir of infection". It is presumed that many people harbor infections for several weeks or months without developing symptoms. In a context of sexual intercourse with an anonymous partner the risk of infection is greater because if the partner was asymptotically infected at the time of contact, there would be no method of informing his/her partners should he/she later develop symptoms of infection. His or her partners, in turn, may be asymptotically infected, and the "reservoir" of these infections would eventually be much greater among the population engaging in anonymous contact than among the population where contact notification (dependent on knowing one's partners' names, addresses and phone numbers) could detect and treat asymptomatic infections more promptly. (This issue will be discussed in more detail in the next chapter.)

The Pill has also been frequently touted by sociological investigators as a contributing factor to increasing S.T.D. rates. Hewitt<sup>56</sup> found that women on oral contraceptives had a three-fold greater incidence of gonorrhoea than women not on oral contraceptives, and commented that "the availability of oral contraceptives may be a factor in the rise of female promiscuity." Several other studies, however, contradict these findings.<sup>57, 58, 59</sup> Furthermore, there is contradictory arguments over whether the Pill, by altering the vaginal pH, increases a woman's risk of



contracting a gonococcal disease when exposed to the infection<sup>60,61</sup> or decreases such a risk.<sup>62,63</sup> Ultimately, Hewitt's contention that oral contraceptive use is correlated to increased risks of gonorrhoea is based on the assumption that women on the Pill will perforce have more sexual partners than women not on the Pill. While women may constrain their sexual behaviour out of a fear of pregnancy, and while the Pill was certainly marketed as the first contraceptive device that was 100% effective in preventing pregnancy, there is no documented evidence that women using oral contraceptives have more sexual partners than women using other methods or no methods at all. Instead, Hewitt's findings could be accounted for in a far less moralistic and sensationalistic way: as Pill use increased in popularity, condom use declined.<sup>64</sup> The condom is reasonably effective in preventing the transmission of many S.T.D.'s, particularly gonorrhoea. Hence, women on the Pill are at greater risk of contracting an infection not because they are promiscuous, but because their contraceptive choice denies them any prophylactic defenses that other contraceptive devices such as condoms, birth control foam and even diaphragms can offer.

Part Four: Sexual Behaviour, S.T.D. and Social Control

Whether religious, nationalistic or psycho-social in theory, most attempts to control the S.T.D. epidemic have been directed towards promulgating a certain form of sexual behaviour, i.e., marital monogamy with a minimal of premarital sexual experimentation. While it is true that such a norm would almost eliminate the transmission of these diseases via a sexual vector, it is not necessarily the only way S.T.D.'s can be controlled, nor even the best or most practical. Sexual behaviour occurs for a number of complex reasons and serves multiple social, personal and even economic and political functions; in few instances would it be ethical to proselytize a certain sexual norm using S.T.D. as a justification. [xi]

Perhaps the major contradiction to this approach is that it rarely, if ever, identifies the process through which sexual monogamy is to be achieved. Its failure to do this rests largely on its apparent reticence to analyze the sociohistorical forces which constrain sexual behaviour. In general, if we wish to understand these forces (and, therefore, one form of behavioural intervention into the control of S.T.D.), then we must recognize that such behaviour is only minimally a biological urge and predominantly a social phenomenon. A cursory examination of anthropology or historical sociology amply illustrates that different cultures, at different times in their evolution, have had disparate forms of sexual

behaviour.<sup>65, 66, 67</sup> One can find monogamy vs. polygamy/polyandry, taboos on adolescent sex vs. pubescent initiation rites, restriction of the numbers of partners vs. socialized hedonism. While our biological urge to have physical intimacy and sexual intercourse cannot be denied, the manner in which we frame this urge, with customs, taboos, evaluations, expectations and so forth, is largely cultural. Furthermore, the sexual climate in which we are acculturated tends to become our "instinctual blanket" which we wear as if it had been intrinsic to our human "nature".

Using the above hypothesis as a grounding point, this last part of this chapter will look at some of the cultural constraints that apply to the sexual behaviour of three commonly identified "high risk" S.T.D. groups: prostitutes, homosexuals and heterosexual swingers.

#### A. PROSTITUTION

There are two possible ways to lower the risk of S.T.D. infection among prostitutes. The first way is the method currently being employed in areas where prostitution is legal (such as Nevada) or where it is at least tolerated to the extent that a "tacit tripartite agreement [exists] between prostitutes, police and public health authorities"<sup>68</sup> as in some West German cities. This approach requires regular medical checkups for the women, including clean "bills of health" to show their Johns, and a heavy reliance on prophylactic antibiotic treatment. To some extent this method is also employed in countries where

prostitution is illegal, either through street clinic services and jail visits by public health authorities or through physicians who maintain a practice by looking after the medical needs of call-girls or whole brothels. This method, however, is far from perfect.

First, its intent has more to do with protecting the health of male johns than that of the women themselves. As social worker, Edith Hooker, stated at the 1919 International Conference on Women Physicians in New York, prostitutes should not be thought of as "foci from which venereal disease spreads", but as "women that are bought by men".<sup>69</sup> She noted that compulsory physical examination of prostitutes had been introduced by men to protect men. Second, such examinations today do not redress the more pervasive problem of sick, impoverished women—junkies, alcoholics, runaway teenagers and the like—who hustle fast tricks for quick money. Any attempt to remove the risks of S.T.D. and prostitution via a behavioural technique requires perforce the elimination of prostitution or, at least, its control through legalized unions such as C.O.Y. O.T.E. (Cast Off Your Old Tired Ethics—a prostitutes' union).

To legalize or eliminate prostitution further requires an understanding that prostitution is not a sexual act but, rather, an economic and political act. For the woman concerned, prostitution is a "profession" she often enters for monetary reasons, usually because she simply has no money. It is the only occupation open to women with minimal job skills where

"big" money can be earned. (Women's salaries in Canada are still only 58% those of men.<sup>70</sup>) For a prostitute's john, sexual intercourse is not "erotic" in some shared sense (how can it be when it is with a personally disinterested partner?). Instead, as feminists have argued and as some research is validating<sup>[xii]</sup>, prostitution is intimately linked to the sexist position of men wishing to dominate or feel dominant over women. The whole business is made more palatable by our society which, with its commodity and profit fetishism, has turned sexual intimacy into a commodity that sells everything from tractors to refrigerators to golf clubs.<sup>71</sup>

## B. HOMOSEXUALITY

Not all homosexuals are members of a high-risk group, and I must be emphatic about that.<sup>[xiii]</sup> There is, however, a certain minority of gay men who are very "gregarious" and at a greater risk of S.T.D. infection than other groups of sexually active persons. In the clinic, for example, it is not uncommon to see the same man several times a year. Why do certain gay men have so many different and anonymous sex partners? One possible reason relates to the fact that homosexuals, like women, are an oppressed group in this society. (In 1977, for example, the B.C. Knights of Columbus earmarked \$150,000 to fight the gay rights movement; more recently there has been the Moral Majority, Renaissance, Anita Bryant and the election of Ronald Reagan.) For years and years gay men have been told that sex between men was an unforgiveable sin against God and

society. [xiv] Now they are rebelling, and their rebellion is, in many ways, a political statement. (A slogan vanguarded by lesbian activists is "The personal is political, the political is personal", a slogan since picked up by many progressive groups.) There is an attitude of coming out, of acknowledging "Hey, I'm gay. I can have sex with other men any time I want to, and to prove it I'm going to have sex just as often and with just as many different men as I can." A gay psychiatrist friend of mine describes it as a stage the gay man goes through after he first comes to grips with his homosexuality. It may repeat, it may disappear and give way to more lasting relationships, it may even continue for a lifetime. (I am reminded of lesbian writer Rita Mae Brown's quip: "I do not regard promiscuity, monogamy and celibacy as mutually exclusive.") What is important to note here is that the behaviour is, in part, a function of the homosexual's oppression. To eradicate the sexual behaviour that places gregarious gay men at the steam baths, one would logically have to begin by eliminating any anti-gay attitudes and discriminatory social policies that necessitate anonymity among gays in the first place. [xv]

## C. HETEROSEXUAL SWINGERS

Discos, singles bars and (at least in New York) Plato's Retreat<sup>[xvi]</sup> serve much the same social function for the heterosexual population that steam baths do for the homosexual population. Amid the trumpet blasts of such successful enterprises as PLAYBOY, PENTHOUSE, PLAYGIRL and the X-rated Seavue Theatre in Blaine, Washington, the sexual revolution of the 1960's presumably heralded an era of libertine hedonism unknown since Casanova's time. Whether this was in fact true (some research indicates that sexual behaviour has changed dramatically<sup>72, 73</sup> while others are more cautious in assuming significant differences<sup>74</sup>) there can be little denying that the singles world as captured by such writers as Judith Rossner in Looking for Mr. Goodbar is a reality for a large number of adults. To this should be added the fact that almost one half of marriages end in divorce, and less than 18% of American families represent the stereotypic norm of father working, mother at home with the kids.<sup>75</sup> The social institution which the monogamy rule upholds (the patriarchal, patrilineal nuclear family unit) is certainly far less stable than most people have been led to believe, and the forces that are rocking it are not going to be muted by the banners of the Moral Majority lobbying for a return to the "barefoot and pregnant" baby mill families of the 1950's.

The current upheaval in sex roles and relationships may well be a factor in increasing S.T.D. rates; but any attempt to redress the epidemic through control of non-monogamous behaviour (particularly amongst the "swingers" group) would require investigating all the factors which shape sexual behaviour at the present time. It would mean examining sexual activity in the disco clubs as an outcome of social needs not being met in other areas of life. It would mean analyzing how we, as individuals and collectively, as men and as women, use sex as one of the most important ways to gain a sense of power.

The sexual behaviour of individuals is not going to bend easily to the propaganda of S.T.D. moralists. Perhaps some control of the disease amongst the gregarious heterosexual or homosexual population might be accomplished through a campaign promoting condom use and awareness of basic symptoms, or perhaps through selective screening programs.<sup>76</sup> But such attempts are clearly not directed at influencing sexual choices so much as at the consequences of not acting in certain ways after sexual choices have been made.



#### D. THE CHINESE EXPERIMENT

The People's Republic of China is the only place in recent history where S.T.D. rates have been, in part, successfully reduced through shifts in the sexual norm. Other aspects of China's S.T.D. campaign have included mobilization of the bare-foot doctors, extensive publication of lists of S.T.D. symptoms with specific instructions on treatment, establishment of a research hospital, and the political indoctrination that S.T.D. belonged to the old, corrupt social order and must, as an act of political revolution, be removed from the new order as quickly as possible. [xvii] The changing sexual norm, however, must be credited with a great deal of China's success in combatting sexually transmitted infections.

Since 1949 China has undergone a dramatic change in its sexual behaviours, metamorphosing from its Shanghai reputation of being the most sinful country in the world to a State that most people would regard as excessively prudish. Yet it is certainly not prudish to re-educate prostitutes, rather than punish them, nor to provide free abortion services, nor to attempt, albeit at times unsuccessfully, to eliminate the roots

of a sexist society. [xviii] Sexual behaviour in China, in fact, is regarded as prudish more by outside observers than by the Chinese themselves.<sup>77</sup> The Chinese accept the new sexual "conditioning" that has taken place since the Revolution as natural, just as we in the West accept our acculturated sexual urges as being normal. In China, in apposition to the West, sex is not a commodity product with assaults the individual at every wink of the eye; it is not elevated to a socially mystical place in a person's life; it is not glorified, sanctified or commercialized. In the cultural milieu of contemporary China, it would only be "natural" to be less obsessed with sex than one would be in our society.<sup>78</sup>

The purpose of briefly mentioning the post-Revolution Chinese experience with S.T.D. control is simply to illustrate the massive social re-structuring that must accompany an approach emphasizing changes in sexual behaviour. I realize that all the above discussions have been somewhat oversimplified; I do not wish to make a thorough analysis of sexual behaviour in the West as that has been done successfully by several writers.<sup>79, 80, 81</sup> I think that it is sufficient to say that any approach to the subject of S.T.D. control favouring changes in sexual behaviours must include perforce a radical re-structuring of sex roles, sexual relationships and the social structures which give rise to them. While this may be a dynamic process that is occurring at the present time, the reasons for such behavioural transformations are not based on a fear of S.T.D.

infection. I am not saying that discussions and actions around these broader sexual themes should be avoided: S.T.D. literature, for example, should be screened for sexism or unconscious kow-towing to moral conventions just as it should be checked for purely descriptive inaccuracies.<sup>[xix]</sup> But to direct ones' energies into a massive campaign aimed at altering sexual behaviour is surely futile. Furthermore, given the context of sexual behaviour, and its often ambiguous relationship to the overall S.T.D. epidemic, it would raise serious ethical criticisms: We'd virtually wind up advocating only one type of sexual activity for "public health" reasons which have never been adequately proven to correlate to the "forbidden forms" of sex. If anything, using S.T.D. as a basis for bolstering the sexual ideology of monogamy seriously constrains any effort to control the disease. It maintains the sexual double-standard which, in turn, reinforces the stigma surrounding S.T.D. This impedes the ability of Control programs to attract people to S.T.D. clinics. It makes people reticent to supply adequate contact information. It is likely one reason why physicians fail to take part in government Control programs (a point which will be discussed in detail in the following chapter). It is also a probable factor in the inadequate research funding and Control program resources that still exist.

A behavioural approach to the control of S.T.D. need not, however, be directed towards sexual behaviour. Instead, there are specific forms of intervention and behaviour change on the

parts of sexually active persons, physicians, government agencies and health educators which, ultimately, can greatly reduce the S.T.D. rates. These are the subject of the next chapter. To conclude this chapter, I will simply state without equivocation: The sooner we exorcise the last vestiges of reproach from S.T.D. (be they religious or "scientific") the sooner we will be able to devise means of actually bringing their incidence and potential for morbid consequences under control.

## FOOTNOTES TO CHAPTER TWO

- [i] Although the modern germ theory is generally credited to 19th century scientific investigators, particularly Louis Pasteur and Robert Koch, like most scientific theories it had been conjectured centuries earlier. In 1546, Fracastor, author of the poem, "Syphilis, or the French Disease", which gave the great Pox a lasting name, wrote a treatise on contagion which described infection by germs ("seminaria contagium"), which possessed a property of producing "a precisely similar infection of one thing by another."  
cf. Theodor Rosebury, Microbes and Morals, Ballantine Books, New York, 1973, p.32
- [ii] The origin of most of our sexual morality also lies in the Bible. Wayland Young, in a book titled Eros Denied, put forward the thesis that the relationship between sex and pregnancy was not well understood until only several thousand years ago. When this discovery was made in the Hebrew world, society was just beginning to develop into a patriarchal theocracy—a state run by male priests. Furthermore, times then were pretty tough for the Hebrews, as they struggled to make a go of it in a desert while being continually harrassed by Philistines, Babylonians, Egyptians and the like. When the link between sex and pregnancy became clear, there was a way to control the population: big for wars, little for famines. All laws at this time were religious laws, so the laws governing sexual behaviour also became religious edicts. Other societies that were not theocratic at the time of the sex-pregnancy discovery organized their sexual mores on different grounds, e.g., the kinship arrangements of several Micronesian cultures.
- [iii] Pope John Paul II's recent statements on sexual behaviour, especially his references to men committing acts of lust if they merely think sexually of their wives, is a testament to the tenacity of this belief, at least among the top-ranking clergy. The pro-fetalist movement is another contemporary example, in that it is usually connected to an anti-contraception, anti-feminist sexual convention. Its close connections to the growing right-wing political conservatism underscores the fact that control of sexual behaviour has often been a directly political event, designed to retain conventional structures of power. Sexual emancipation, for instance, is often feared by conservatives because it could spawn a demand for other forms of political emancipation. cf. F.X. Murphy, "Of Sex and the Catholic Church", Atlantic, 247:2, February 1981.

[iv] It should also be noted that not all witches or warlocks were deemed such by dint of their sexual activities or religious irreverance. Most witches, in fact, were peasant women who were treating illness (including V.D.) through traditional herbal remedies. This contradicted the disease dogma of demons which the Church had adopted, and thus posed a threat to the male-dominated and highly theocratic church/state structure that existed at the time.  
 cf. Barbara Ehrenreich and Deirdre English, Witches, Midwives and Nurses, The Feminist Press, SUNY, N.Y., 1973

[v] The condom, in fact, goes back much further than the 18th century:  
 "A sheath worn over the penis can be found in history as far back as 1350 B.C., when Egyptian men wore decorative covers for their penises. The great Italian anatomist, Fallopius, described the use of linen sheaths in 1564. Protective devices from animal intestines soon followed. It was not until the 18th century that penile sheaths were given the name "condom" and popularized by the libertines of the day as a means of "protection from venereal disease and numerous bastard offspring."  
 Casanova (1725-1798) was among the first to popularize the condom for its contraceptive use. With the advent of vulcanized rubber in the 1840's came mass production of condoms...from synthetic materials."  
Robert A. Hatcher et al, Contraceptive Technology, 1980-1981, Irvington Publishers, N.Y., 1980, p.86

[vi] Some progress, however, is being made. In 1978 I read this same passage in a lecture on the sociology of V.D. to a class of nursing students, many of whom cried out "Sounds just like us!" and burst out laughing.

[vii] The poster sparked a humorous row in the B.C. Provincial Legislature when Dr. Pat McGeer, then a Liberal M.L.A., read the following ode:

Why stand you there my red haired lass  
 So fine a girl—so full of class  
 Is it our hopes that makes us think  
 You want to give some man a wink  
 Are you waiting for a date  
 Or have you a husband always late?

Kind Sir I'm waiting for a bus  
 'Twas the Government that caused this fuss  
 I paused a minute to decide  
 If I'd the money for a ride  
 It takes so much you know these days  
 A girl must ponder means and ways

My reputation began to fall  
 With modelling jobs as I recall  
 But sir, I'm afraid you have got me wrong  
 And I'd be pleased if you'd move along  
 We may meet again if the game you play  
 Leads to the Clinic where I work each day.

A less humorous response was penned by a Mrs. Ede Anfield, columnist with the Comox District Free Press, who may have thought her March 6th, 1965 column on women's angered reaction to the poster was witty, but which nonetheless reiterated two V.D. myths, as the following excerpts illustrate: "Who in the animal world pushes the male on; it is the female...it is the female who is the most dangerous and the most cunning....It would be more to the point if you [protesting "dames"] had taken more notice of the rise in homosexuality which is one of the great spreaders of V.D. You would do well to expend your energies in trying to find out why this rise; you might ask yourselves, is there too much momism, or is the male being relegated to a more and more subservient role to the female, and therefore seeks the company of other males, in preference to the dominant female."

Both the above passages are taken from personal files.

[viii] Because this historical survey is closing in on the present, I will now introduce a nomenclature in current usage. Venereal disease, as a term, was first coined to describe what was thought to be a single disease. As syphilis and gonorrhoea became differentiated, V.D. was used to refer to both. By the end of World War Two, the World Health Organization identified 5 venereal infections: gonorrhoea, syphilis, lymphogranuloma venereum, chancroid and granuloma inguinale. The latter three are rare except in tropical climates. Even now these 5 diseases are the only ones covered in B.C. by the "V.D. Suppression Act" of 1949, although in the past few years increasing public attention—a result of improved diagnostic procedures—has been given to a variety of other infections. These include monilia, trichomoniasis, hemophilus, chlamydia, herpes, non-gonococcal urethritis, infestations, warts, tinea cruris and sexually transmitted enteric infections. Although few of these infections are transmitted exclusively by sexual contact, they all share a sexual vector of transmission. Collectively they are now referred to as sexually transmitted (or transmissible) diseases. I prefer "transmissible" because it allows for non-sexual as well as sexual means of transmission. A description of the more common S.T.D.'s—their etiology, symptoms and morbidity—is contained in Appendix I. Because S.T.D. has not entirely supplanted use of the term V.D.,

both these terms will be encountered in the rest of this paper, depending on the topic I am addressing and how my references use the term.

- [ix] A more recent incarnation of this belief can be found in the attempts to link S.T.D. risks to certain demographic and socioeconomic classes. For example: "...syphilis occurs predominantly in homosexual males and in lower socioeconomic heterosexuals; gonorrhea also involves these groups but is relatively more common in teenagers and middle socioeconomic young people; nonspecific urethritis [N.G.U.] is more common than syphilis or gonorrhea in male college students..." (Gavin Hart, Sexually Transmitted Diseases, Carolina Biological Supply Company, North Carolina, 1976, p.13) As another example, a recent medical journal ad stated that a new antibiotic was effective against two of the most common sexually transmitted infections. On one page was a photo of a well-dressed businessman sipping a cocktail in the company of a well-dressed woman. The disease: non-gonococcal urethritis. On the opposite page was a photo of a sailor in a bar, his arm around a literally "painted" lady. The disease: gonorrhea. The message is clear. Upper classes are afflicted with one disease, lower classes with another.

It is moot whether the studies which support such a conclusion actually reflect differences in the distribution of these diseases, or differences in diagnostic and reporting procedures of treatment facilities which cater to different classes. What is certain is that some V.D. health professionals view these differences in a somewhat moral and elitist light. For example, Hart's passage cited above continues: "[S.T.D.] infection rate usually decreases gradually as education increases, the most dramatic reduction occurring among those with tertiary or university education. This group is less promiscuous and accounts for fewer cases of S.T.D.'s. The better educated individual derives satisfaction from a wider variety of nonsexual activities and also depends less on sexual outlet in periods of stress. In selecting a sexual partner he is more discriminating and tends to establish a more stable relationship than his less-educated counterpart. There is also a direct relationship between education and fellatio, masturbation, and other sexual outlets associated with a reduced risk of infection." (p.13) I have also heard patients sigh with relief when they are told that they have N.G.U. because "at least it isn't the clap!" Stigmatization and S.T.D.'s operate in subtle ways.



- [x] Most personality theories conflict with each other over the validity of their assumptions, and only a few of them (notably Lewin's Field Theory) take the social context of behaviour into account. cf. C.S. Hall and G. Lindzey, Theories of Personality, John Wiley and Sons, Toronto, 1970; especially Chapter 6, "Lewin's Field Theory", and Chapter 15, "Personality Theory in Perspective".
- [xi] One instance may be the control of herpes, a viral infection for which there is no cure. In the wave of media-sponsored alarmism surrounding this disease, clubs of herpes infected persons have been established in many cities with the purpose of having members only engage sexually with other members, thereby constraining the spread of the disease. Some opinion exists that herpes is much more pervasive than it seems, and I personally doubt that such clubs will really reduce the incidence of the disease or of its possible carcinogenic and teratogenic consequences. Nonetheless, the advocacy of certain sexual norms by these clubs is worth noting because it clearly differs from that which we have so far encountered. It is not based on numbers of partners, frequency of sexual contact, whether contact is hetero- or homosexual, or even the personality make-up of individuals. Instead, it is based upon the nature of the organism that is responsible for the disease, and nothing more. What I have been critical of to this point is not a behavioural approach to S.T.D. control, but of the particular behavioural approach that has pervaded control programs to the present.
- [xii] Dr. Jennifer James (Faculty of Medicine, University of Washington, Seattle) has informed me that many of the johns she interviews in her work on juvenile prostitution readily admit that they choose younger women because it is easier to dominate them. Her studies, to the best of my knowledge, have yet to be published.
- [xiii] On a t.v. show three years ago, for instance, I was asked by a caller that, since gays are well known to be promiscuous, aren't they really to blame for the V.D. mess we're in?
- [xiv] Homosexuality has not always been a forbidden sexuality. Greek and Roman societies, for example, regarded homosexuality as a normal sub-grouping of behaviour. In fact, the current outcry against homosexuality has its roots in the formalized double standard of the post-Industrial Victorian era, a scant 100 to 150 years ago. The religious edict against homosexuality may have had

its origin in the general control of sexuality within the Hebrew theocracy. (see Footnote [ii]) Since homosexuality did not have any relationship to procreation, and since early cultures were more concerned with controlling population than sexual activity per se, the only consistent manner in which a theocracy could control population via heterosexual contact was to literally prohibit sexual contact for non-procreative purposes, which would include homosexuality.

[xv] Early this year (1981), Ontario police started cracking down on the "acts of public indecency" and "bawdy house" policies of gay steam-baths in Toronto. While this may put a dent in the S.T.D. rate amongst these men, it does so only by putting a dent in their heads and lives as well.

[xvi] Plato's Retreat caters to young, affluent couples who, upon paying a substantial cover charge, can doff their clothes and join their peer group in a swank lounge featuring whirlpools, saunas, bars, dance floors and mattresses all over the floors. The explicit intent of going into the club is to have sex with as many other people inside as one wishes. To be present inside is to advertise that one wishes to engage in an orgy.

[xvii] This, of course, may be counterproductive in the long run, in that a person who develops an S.T.D. may be reticent to go to a clinic for fear of being judged a reactionary "capitalist roader"!

[xviii] The emancipation of women in China may be experiencing setbacks. For what it's worth, a recent article in The Vancouver Sun mentions that fewer women are now attending Chinese Universities than in the past decade because women are less intelligent than men by virtue of having smaller brains. ("Chinese Find Men Smarter", The Vancouver Sun, page A2, Friday, February 13th, 1981)

[xix] For instance, while the particular risks of S.T.D. infection facing gay men have been fairly well addressed in specialized pamphlets and programs, gays have largely been "excluded" in normal S.T.D. information material. But to exclude a discussion of homosexuality and S.T.D. from general pamphlets, classroom presentations or mass media campaigns (as we were advised to do with our campaign) is to pass an implicit moral judgement by default, i.e., to communicate to the general public that homosexuality is not something which can be openly acknowledged.

CHAPTER THREE

Exorcising Demons: Epidemiology and S.T.D. Control

He who would do good to another must do it in Minute Particulars. General Good is the plea of the scoundrel, hypocrite, and flatterer; For Art and Science cannot exist but in minutely organized Particulars.

William Blake, "Jerusalem", 1804

Part One: Epidemiology Defined

When confronted with a problem to solve, the first approach is usually to define it in such a way as to create opportunities for intervention and change. In the preceding chapter I argued that the moralistic definitions of S.T.D., while correct in their postulate that absolute and universal monogamy would all but eliminate these infections, nonetheless operated to thwart rather than aid attempts to curb the epidemic. Their solution was simply untenable and proffered for reasons which I maintained were less concerned with S.T.D. than with enforcing certain sexual standards. In this chapter I will outline a model derived from epidemiological concepts, and will discuss several possible control strategies.

Epidemiology (epi—upon; demos—the people; logia—knowledge) has, like many 20th century subdivisions of the scientific method, suffered long and hard attempts at definition. Descriptively, it is the science which states how much of a phenomenon (usually infectious diseases<sup>[1]</sup>) is occurring when, where and to whom (with respect to other whens, wheres and to whoms) for the purpose of explaining why it occurs and what formulating should be done about it. The descriptive qualities of epidemiology, in fact, have sometimes led people to dismiss

it as a purely quantitative venture. Yet it has also been pointed out that "with some justice epidemiology has been called a method rather than an independent science."<sup>82</sup> Using quantitative indices (and the epidemiologist's own sense of inductive intuition and adventure) epidemiology is the art of creating definitions of disease-phenomena which outline ways in which the disease can be curtailed.

Disease is not simply something that happens when a foreign organism invades the body.<sup>[11]</sup> Defined by the Merriam-Webster Pocket Dictionary as "an alteration of a living body that impairs its functioning", disease is an outcome of the interactions of foreign organism, host organism and the environment in which infection takes place. Although there may be different "strains" of any one disease organism, it is generally possible to outline how that organism survives in a host, and thus anticipate the potential for damaging consequences to a host. No two hosts, however, will necessarily respond in the exact same manner to the presence of a disease organism. Person A, for instance, may contract disease Z while person B, exposed to the infection at the same time and perhaps even under similar environmental conditions, will not. The individual variables affecting susceptibility to infection are so numerous—and include possible genetic predisposition, overall health status, presence of other infectious organisms, and so on, each dependent, in turn, on a number of possible environmental factors such as poverty, nutrition level, exposure to

environmental pollutants, and so forth—that absolute cause-effect relationships in disease cannot be made. When the socioenvironmental context is added to the disease model, the analysis becomes even more complex.

For example, black men seem to be infected with gonorrhoea to a disproportionately greater degree than white men, while the latter seem to be infected with non-gonococcal urethritis to a disproportionately greater extent than the former.<sup>83</sup>

Is this a result of racial/genetic differences in disease immunity? Or could this be a result of social factors affecting different nutritional, health and lifestyle experiences that favour one disease over the other? Or could it even reflect differences in the way diagnoses are determined for the two groups? In other words, is the racial difference in disease incidence a result of the disease organism's specificity, host susceptibility, or the environment (i.e., diagnostic and reporting procedures)? No definite answer to this particular research puzzle has yet been made.

The above example clearly points out that virtually all quantitative data which an epidemiologist uses to forecast patterns and deduce strategies are "soft" data. What is critical is not what is "right" (fact) from what is "wrong" (fallacy), but what is more theoretically astute, methodologically precise and generously  
any particular set of data. Once an explanation is advanced it must stand the test of time and repeated trials, and be

discarded or altered as necessary. (My own experience with discarding a beloved assumption—or at least admitting to several confounds in my attempt to "prove" it—will be discussed when I describe the S.T.D. campaign and its outcome in the next chapter.)

Strategies for intervention into the disease phenomenon cannot, alas, accommodate all the variables, simply because not all the variables are known. For practical purposes it becomes necessary to conceive of the disease organism, the host and the environment as somewhat discrete systems, and to construct measures derived from examining how each of these systems bears on the disease state, "the impairment of a body's functioning." All S.T.D.'s share a common vector of transmission (although not exclusively) and overlap to some extent in treatment measures, i.e., use of antibiotics. A strategy for one disease may thus apply to another. For the purpose of this chapter, I will focus my discussion on gonorrhoea alone for the following reasons:

1. It is one of the "official" V.D.'s, and good records of reported incidence are available.
2. Its incidence remains high: 9,461 reported cases in British Columbia in 1979<sup>84</sup>; 44,412 reported cases in Canada in 1980<sup>85</sup>; and 1,003,958 reported cases in the United States in 1979<sup>86</sup>.
3. Untreated, gonorrhoea causes considerable morbidity, especially in women. Estimates of the incidence

of salpingitis (pelvic inflammatory disease; cf. Appendix One) among women with gonococcal infections range from 12.9%<sup>87</sup> to 17%<sup>88</sup> to 20%<sup>89</sup> and sometimes higher.

In fairness to this last point, and as another illustration of the quagmire of scientific investigation, there remains some controversy over the precise role of gonorrhea in pelvic inflammatory disease. Research reports on the involvement of gonorrhea in all cases of P.I.D. vary from 20-80%<sup>90</sup>, 44%<sup>91</sup>, 68%<sup>92</sup> to 90%<sup>93</sup>. In general, most researchers argue that gonorrhea accounts for a majority of P.I.D. cases resulting from infection (in distinction to P.I.D. consequent to IUD use, abortion, trauma, etc.) Another study, however, maintains that causality should be reversed, with non-gonococcal anaerobic organisms held responsible for the majority of P.I.D. and gonorrhea implicated in only a minority of cases.<sup>94</sup> This latter study is a good example of the difficulty in making "hard" pronouncements. Its data is based on the presence or absence of gonorrhea in the inflamed fallopian tubes, rather than on the presence or absence of gonorrhea in the endocervical canal, the technique used by researchers assigning a greater involvement of gonorrhea in P.I.D. This study is more rigorous in tracking down the organism at the actual site of infection, yet it is still inconclusive. Specifically, many researchers feel that a woman suffering one acute attack of gonococcal P.I.D. is much more susceptible to recurrent



attacks caused by anaerobic organisms which, if the first attack hadn't occurred, would not by themselves have produced a P.I.D.<sup>95</sup> The "confounding" study, then, while finding a higher incidence of anaerobic P.I.D., might only be catching the inflammation after the gonococci have disappeared and allowed the anaerobes to "set up shop". The complex web of cause-effect ever tangles as more knowledge is uncovered! (Or, as my 80 year-old grandfather puts it, "The more you know, the less you know.")

#### A. THE CURRENT EPIDEMIC

Accurate records of gonorrhoea incidence have never, and still do not, exist; excluding human error in making a diagnosis in the first place, only a minority of suspected cases ever get reported to public health authorities and, hence, recorded. (Why this is so and its impact on control programs will be discussed later.) Relatively consistent figures on the reported incidence of gonorrhoea have been maintained since at least 1940 in Canada and the United States, and these are reproduced in chart and table form in Appendix Two.

In general, gonorrhoea rates peaked shortly after the War, possibly a result of demobilization of the army, and declined or inclined only slightly during the 1950's and early 1960's. They began to climb steeply around 1965 (surpassing the 1946 peak in 1971 in the U.S.<sup>96</sup> and in 1976 in Canada<sup>97</sup>) and have remained consistently high. The usual explanations for the dramatic rise in the gonorrhoea rate over the past fifteen

years were the subject of the last part of the preceding chapter. I criticized these explanations as being shoddy, although we can accept one thesis as bearing on the rise in the rates: It is probable that more people were becoming sexually active with more partners and at younger ages than in previous years. This is not, however, the only—indeed, even primary—factor in the steep incline in disease incidence.

For example, while a "rate" is supposed to reflect the incidence of a disease holding the population base constant (i.e., x cases of disease/100,000 population), it cannot reflect qualitative changes within the population base that might distort interpretations of the rate. Specifically, the mid-60's saw the first sexual maturing of the post-War baby boom, which continued into the early 1970's. I am now going to engage in an exercise to illustrate what effect this phenomenon has on interpreting the rise in the gonorrhoea rate between 1968 and 1976.

Below is a table for the years 1951, 1956, 1961, and 1966-1976 inclusive. Calculations have been made for each year indicating:

- \* The gonorrhoea rate (annual Canadian incidence/100,000 population).<sup>98</sup>
- \* The per centage of the total Canadian population between the ages of 15-55.<sup>99,100,101</sup> I will make the assumption that persons under 15 and over 55 do not engage in sexual behaviour that would place them at any

great risk of gonococcal infection.

- \* The above per centage expressed as a rate, i.e., the number of persons aged 15-55 per 100,000 total population.
- \* The gonorrhoea rate adjusted for shifts in the population rate, i.e., the gonorrhoea rate/15-55 population rate times 100,000.
- \* The per centage of the total Canadian population between the ages of 15 and 34, which constitutes the greatest age-specific risk group. This age group is often presumed by health professionals, V.D. control program directors and the society-at-large as engaging in sexual behaviours that would place them at a substantially greater risk of gonococcal infection than any other age group.
- \* The above per centage expressed as a population rate.
- \* The gonorrhoea rate for this particular age group<sup>102</sup> [iii], referred to as the gonorrhoea rate'.
- \* The gonorrhoea rate' adjusted for shifts in the 15-34 population rate.

Gonorrhoea rate/100,000 pop.	1951	1956	1961	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
15-55 age group/total pop.	54.2	52.6	51.4	52	52.5	53	53.5	54.1	54.3	54.9	55.6	56.3	57	57.3
15-55 age group/100,000 pop.	54,200	52,600	51,400	52,000	52,500	53,000	53,500	54,100	54,300	54,900	55,600	56,500	57,000	57,300
Gonorrhoea rate adjusted to 15-55 rate	199.1	172.2	175.5	206.3	211	205	244.1	272.8	272.3	346	369	377.3	390.5	400.5
15-34 age group/total pop.	23.7	29.3	27.9	28.9	28.5	30.1	30.8	31.4	32	32.7	33.4	34.2	34.9	35.2
15-34 age group/100,000 pop.	23,700	29,300	27,900	28,900	28,500	30,100	30,800	31,400	32,000	32,700	33,400	34,200	34,900	35,200
Gonorrhoea rate'	83.3	73.7	73.3	87.3	90.1	88.3	104.9	120	129	154.4	166.8	172.7	181	181.6
Gonorrhoea rate' adjusted to 15-34 rate	351.5	251.5	262.7	302.1	305.4	293.4	340.6	382.2	403.1	472.2	499.4	505	518.6	530.1

TABLE 1: Gonorrhoea rate, Canada (1951, 1956, 1961, 1966-1976) adjusted to two age groups

From this table we can observe that:

- \* The gonorrhea rate increased by 111% between 1968 and 1976, (from 108.6 to 229.5).
- \* When adjustments are made to account for shifts in the population rate of the 15-54 age group, the increase is reduced to 96% (from 205 to 400.5).
- \* When further adjustments are made, accounting for shifts in the population rate of the "high risk" 15-34 age group, and calculating their age-specific rate, the 1968-1976 adjusted rate increase becomes 81% (from 293.4 to 530.1), a full 30% lower than the reported gonorrhea rate itself would indicate.

These calculations for age-specific rates provide us with a different picture of disease incidence than the gonorrhea rate alone provides us, and offers us a first caution in using the gonorrhea rate to definitively pronounce age-specific disease incidence.

Even making adjustments to the gonorrhea rate to account for increases in the sexually active "at risk" population does not alter the fact the gonorrhea is more pervasive now than it was fifteen years ago. Other conditions which existed during the period of increasing gonorrhea rates which may have affected their rapid rise, and which are unrelated to the 3 P's postulate previously criticized, include:

**MOBILITY:** As the phenomenon of transient youth increased in the late 60's and early 70's, so did the difficulty of contact

tracing and epidemiological treatment (i.e., treatment of named contacts without confirmation of infection.) This presumably led to increased numbers of persons receiving treatment only after ample time had passed for the infection to be transmitted to several others. It is further presumed that transience coincided with an increase in "short term serial monogamy", a sort of "sowing the wild oats" by young men and young women alike. While neither assumption has been empirically demonstrated, both contain a grain of logic.

**INCREASING RESISTANCE TO ANTIBIOTIC TREATMENT:** Shortly after the introduction of penicillin, gonorrhea rates plummeted. This has been accounted for by the "fallout" effect of widespread use of antibiotics at a time when the therapeutic dosage for gonorrhea was low enough that undetected cases were wiped out as a "bonus" following antibiotic treatment for other ailments.<sup>103</sup> The overall gonorrhea reservoir was lower and resulted in lower rates of infection. As the gonococci mustered resistance to penicillin, nullifying the fallout effect, rates began increasing. Larger doses of antibiotics were needed to kill the organism, and people were once more in a position of seeking treatment in the face of the deterring social stigma of having "one of those diseases".

**ASYMPTOMATIC INFECTIONS:** It is obvious that if one doesn't know that one has a disease, one won't seek treatment. Clear documentation of asymptomatic gonococcal infections didn't occur until the early 70's, and it is presumed that their

prevalence increased during the 1960's and 1970's. As asymptomatic infections increased, so did the time lag between infection and eventual treatment. This allowed more opportunity for the disease to be spread, and for the reservoir of infected persons to rise.

**STRENUOUS CONTACT TRACING:** As the rates increased, public health attention was directed at improving epidemiological work. This brought more people into clinics for treatment, contributing to higher rates. It is always vital to remember that the gonorrhea rate only reflects the number of diagnosed, treated and reported cases. As Lundin etal commented, "It is not known whether more patients with venereal disease are now being treated, or if more people are becoming infected."<sup>104</sup> To some extent, the higher the annual gonorrhea rate, the lower the reservoir of untreated people in the community-at-large.

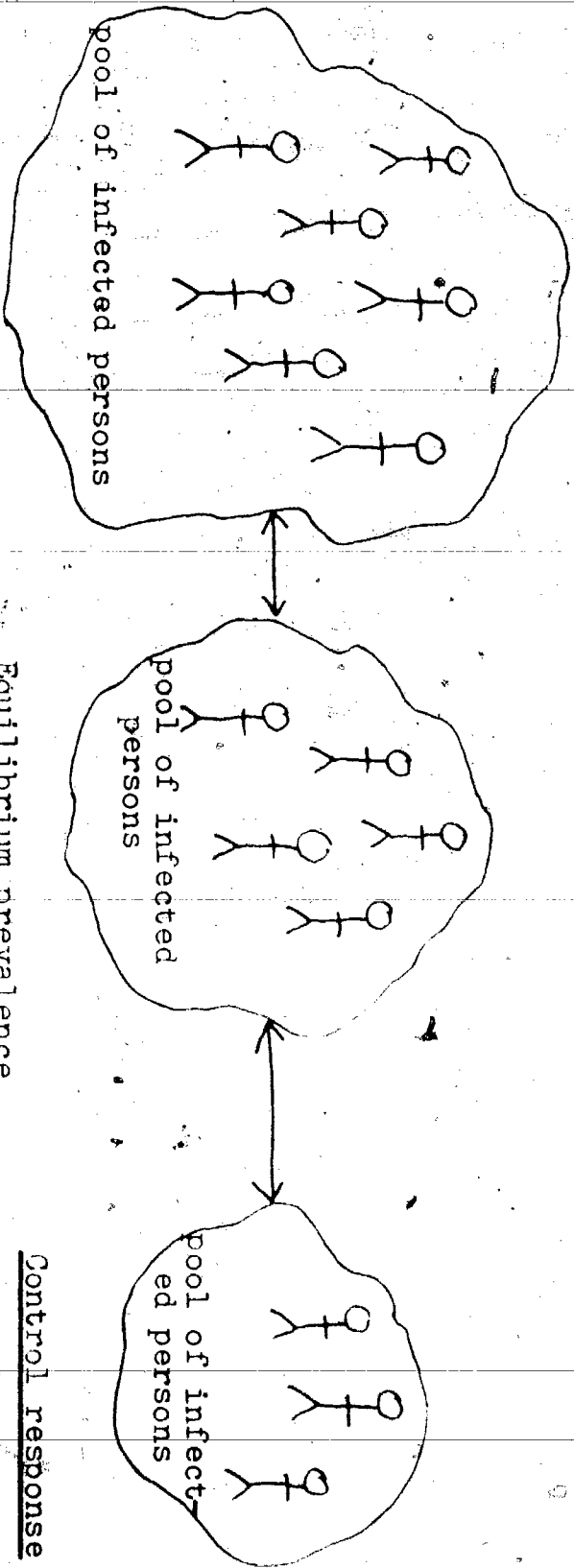
**DE-STIGMATIZING S.T.D.:** One of the effects of the so-called sexual revolution was cracking the double standard and encouraging open discussion of sexual matters, including S.T.D. In this context S.T.D. became less of a moral blight and more of an infectious condition requiring prompt treatment. More people sought treatment and made efforts to ensure that their partners were treated, creating an increase in the rate. [iv]

I am not arguing that these factors completely account for the rise in gonorrhea incidence. At the bottom line, no one can demonstrate precisely why the reported rate rose so

rapidly. The above factors do argue for specific changes in the disease organism itself, in certain patterns of personal behaviour, and in the larger social environment. As such, they depart from the more generalized conclusions of the psychosocial theories, and permit us to move on to a precise delineation of control strategies related to the organism, the host and the environment.



ILLUSTRATION 5: A Model of Gonorrhoea Prevalence



Organism response

The organism attempts to increase the pool. Two such responses have been developing antibiotic resistance (e.g. penicillinase-producing strains) and becoming asymptomatic (constraining control measures to treat symptomatic persons and their contacts).

Equilibrium prevalence

In this situation there are no control measures to alter the "natural" equilibrium of disease prevalence.

Control response

Control programs attempt to "shrink" the pool by altering host response (see Illustration 6) and environmental response (see Illustrations 7 & 8).

Part Two: The Disease Organism

Gonococci are very fragile organisms which die quickly when exposed to air (usually within 2 to 3 hours). Their transmission thereby requires physical contact between an infected person's mouth, urethra, vagina or rectum, and an uninfected person's mouth, urethra, vagina or rectum (any combination will do). Of all the S.T.D.'s, gonorrhoea is probably the one least likely to be picked up in any way other than genital, oral or anal intercourse.

There are only two effective strategies that can be directed against the organism itself. The first would be the development of a vaccine (not yet accomplished); the second is treatment with antibiotics (currently being practiced). The success of the latter depends on people either seeking or being drawn into a medical system of diagnosis and treatment which, in turn, is affected by the size, structure and effectiveness of the medical system.

The organism also conspires against control measures. It has a short incubation period (2-7 days) and thus becomes infectious shortly after infecting a person, often before the individual has developed symptoms alerting her/him to the presence of disease.

A recent study into the behaviour of gonococci has also shed some light on future ways of dealing more effectively with the organisms.<sup>105</sup> The authors conclude that gonorrhoea becomes

infectious only after a certain number of organisms are present at a particular site, e.g., the urethra in males, the endocervical canal in females. Ways of improving detection and rapid treatment of infected persons could reduce the chances of further disease transmission by killing the organisms before they have attained a sufficient population to become infectious. The authors further conclude that a partial vaccine effective against "a challenge of  $10^5 - 10^6$  cfu [colony forming units] of N. gonorrhoea may have promise in the control of gonorrhoea", and add that such a vaccine is in the experimental stage with chimpanzees. (It is also thought that spermicidal contraceptive foams may inhibit the growth of gonococcal colonies in women.)

Another study suspected that only 22% of men exposed once to an infected woman developed gonococcal urethritis.<sup>106</sup>

(Urethritis is an inflammation of the urethra, causing symptoms of painful urination and a discharge of pus from the penis, indicative of an infection.) Women, presumably, also face different risks of infectivity when exposed to an infected male, depending, for instance, on the force of ejaculation (which contains disease organisms), whether or not the male ejaculates into the vagina, and even how deep into the vagina ejaculation occurs, since the gonococci favor the endocervical canal. In both males and females, the "health" of the urethra or vagina—its relative susceptibility to the "invading" organism—may be a factor in the probability of contracting an infection when exposed to it, particularly with women.

The pH level of the vagina has been shown to favour or disfavour the growth of certain organisms<sup>107</sup> and it is conceivable that methods could be devised to use this to the detriment of the gonococci.

Part Three: The Host

The boundaries between the host and the disease organism blur, as the discussion of host susceptibility in the last paragraph above demonstrates. What has historically been considered the host's role in a gonococcal infection are those personal behaviours which either increase or decrease his/her risks of encountering an infection in the first place. Although this has led to a general round of victim-blaming over the centuries, it need not be so; there is no reason why specific individual behaviours should be excluded in assessing personal risk factors and S.T.D. The risk factors (and intervention strategies implicit in them) that will be considered in this section include:

- \* number of partners
- \* nature of sexual contact and the phenomenon of asymptomatic infections
- \* contraceptive choice
- \* quality of interpersonal communication
- \* contact information

A caveat is issued with these risks: they are not static. They have a certain predictive value, but as one venereologist quipped, "it may justly be stated that with very few exceptions all society is at risk at some time and that the differences between those who contract no infections in their life and many of those who do so but once may be dictated more by luck

than behaviour."<sup>108</sup>

#### A. NUMBER OF PARTNERS

Before any disease can occur, a person has to come in contact with the infecting organism. Simple logic tells us that, given the virtually exclusive sexual vector of gonorrhoea's transmission, the more partners one has the greater one's chance of being confronted with the disease. As with all normatively expressed data, there is the phenomenological confound: A person may have 100 different partners in a year who (improbably but possibly) may all be free of infection, or a person may have only one partner in a year who (again improbably but possibly) may have a dose. The relative risk is certainly higher in the former case and lower in the latter, but it is still "relative" in the sense of depending on a number of other variables.

For instance, assume that a sexually maturing population of young teenagers has sex only with their uninfected peers. For as long as that trend continues, their risk as determined by number of partners is irrelevant, in contrast to young adults who have come into sexual contact with older, presumably infected partners. An interesting strategy can be constructed on this principle, based on the same technique of constraining sexual behaviour as the old moral imperatives, but with a refreshing twist. Rather than urging monogamy, we can urge all persons starting sexual activity for the first time in 1982 to only have sex with their peers, i.e., other persons also

becoming sexually active for the first time, and henceforth urge all sexually maturing persons to do likewise. This would eventually have the same control impact as that of monogamy (i.e., it would slowly squeeze the disease out of existence as the reservoir of infected persons in 1982 aged, received treatment, or died) and would still allow for non-monogamous sexual conventions. It would nonetheless fail for the same reasons that the monogamy rule has failed: sexual choices are based upon numerous factors, of which the risk of S.T.D. is only one and, given alternative preventive measures, a fairly minor one.

In sum, reliance on defining risk as primarily dependent on the number of different sex partners, like any normative statistical assessment, may blind one to other important variables. Some health professionals, for example, have constructed elaborate binomial tables for both men and women, expressing risk of infection in relation to the number of different partners, the number of exposures and the probability of different partners being infected.<sup>109</sup> While sound in numerical theory, these calculated probabilities must be taken with several grains of salt, viz., some of the risk factors discussed below.

#### B. NATURE OF SEXUAL CONTACT AND THE PHENOMENON OF ASYMPTOMATIC INFECTIONS

I have already touched upon the notion that the nature of sexual contact, specifically whether or not it is anonymous, may be more important in assessing individual risk than the

number of partners. This is based upon the phenomenon of asymptomatic gonococcal infections. If all infections produced symptoms then the need to promote notification of an infected person's contacts would not be great, because all persons would be aware of the presence of disease. Publicizing the symptoms and treatment locations would be sufficient to ensure prompt remedy and, eventually, a reduction in the gonorrhoea rate. Any advantage of contact tracing would be minimal in such a situation.

The problem, however, is that many—perhaps even a majority—of infected persons do not develop symptoms for several weeks or months, and a small minority may never develop symptoms until the disease has considerably progressed. Research estimates of the extent of asymptomatic infections vary greatly. Males with gonorrhoea are considered to be asymptotically infected at least 10% of the time<sup>110</sup> with some studies setting the figure as high as 40% and 68%.<sup>111</sup> A 15% estimate is the one currently accepted by the Division of V.D. Control in British Columbia.

Females are presumed to have an even greater rate of asymptomatic infections for anatomical reasons. In the male, the gonococci infect the urethra and, when symptomatic, cause a dysuria and a discharge. In females, the gonococci infect the endocervical canal. There is no dysuria unless the urethra is also infected, which is rare and likely consequent to contamination from a gonococcal vaginal discharge sometime after the



initial infection. A vaginal discharge probably occurs in most cases, but since vaginal secretions are common in women and usually non-pathogenic, such a discharge (unless copious) would not necessarily alert women to the presence of a disease. There is disagreement over how many women are truly asymptomatic or minimally symptomatic; a commonly accepted figure is approximately 80%.<sup>112,113</sup>

Treading softly on "soft" data, then, we are left with estimates that as many as half of all infected persons develop insufficient symptoms (at least for the first several weeks) to alert them to the presence of disease. Gonorrhoea can therefore be unwittingly spread to many other persons before an individual is aware that she/he has a disease. In this situation, an infected person's responsibility to notify all his or her partners to the possibility of their having the disease becomes critical.

When sexual behaviour occurs anonymously the contact notification system breaks down. Not only does this confound control of the disease; it also places persons engaging in anonymous contact at a much greater risk of infection than those who do not. Assuming that most infected persons desire to protect their health and that of their partners, they will likely ensure that their partners are notified if they themselves develop symptoms of infection. But to notify their partners they must know their names, addresses and phone numbers. In a social context where non-anonymous sexual contact is the rule rather

than the exception, it is logical to assume that the reservoir of undetected, asymptomatic cases is much lower than in a social context where anonymous contact (which prevents detection of asymptomatic cases) is more frequent.

A B.C. venereal disease poster from 1975 stated that one of the preventive measures people could take would be to "Know Your Partners". Unfortunately, without further specifics, this statement still implies a moral imperative: if you really know your partner (which takes time), you won't behave promiscuously and will therefore be unlikely to get an S.T.D. This has already been criticized as oversimplistic and not terribly useful. It is more accurate to urge individuals to always know their partner's name, address and phone number, so that if infection occurs contact notification can be made. This approach is interesting because it is based less upon primary prevention (avoiding an S.T.D. in the first place) and more upon reducing future risks by attempting to "drain" the asymptomatic reservoir. Given the prevalence of gonorrhea, long term prevention strategies are probably more pragmatic than primary prevention strategies, with the exception of encouraging disease prophylaxis via contraceptive choice.

Another intervention strategy implicit in grappling with asymptomatic infections is the promotion of regular S.T.D. checkups. Initially vanguarded by the gay community as a means of combatting the risks of multiple, anonymous contacts, S.T.D. checkups are now being encouraged by many control programs

(once every three months for "high-risk groups" [those with multiple anonymous contacts], and annually for lower-risk groups). Since women often have regular internal examinations or pap tests, and since some S.T.D.'s have non-sexual vectors of transmission, the Division of V.D. Control in British Columbia has recommended that routine S.T.D. cultures be considered by both patients and physicians during such exams as this procedure adds only a few minutes to the office visit.

Finally, it is likely that these first two host risks—number of partners and anonymous contact—are intricately dovetailed. The more partners a person has, the more probable it is that she or he does not know their full names, addresses and phone numbers. This is certainly true of the gay steam baths, where anonymous contact and multiple partners are flip sides of the same coin. Furthermore, it is likely that the heterosexual swingers described in the previous chapter face the same dual risk. It may be that the evidence suggestive of gonococcal infection risks increasing with the number of different partners reflects the problematics of asymptomatic infections and anonymous contact rather than any inherent statistical risk in "promiscuity".

### C. CONTRACEPTIVE CHOICE

Contraceptive method is probably the one behavioural choice that can effect the greatest influence on risk of infection. Specifically, proper use of the condom (i.e., such that there is no genital-genital or genital-anal contact without condom

protection at any time during lovemaking) can greatly reduce the risk of gonorrhoea transmission.<sup>114, 115</sup> It is suspected that vaginal birth control foam also offers some degree of prophylactic protection in women, whether or not male partners use a condom.<sup>116</sup> If both condom and foam are used, the risk of gonorrhoea transmission is almost nil, and the couple also has contraceptive protection almost equalling the effectiveness of the Pill.<sup>117</sup>

Since the introduction of the Pill, the American pattern of condom use has radically changed. In 1960, 31.7% of couples used the condom<sup>118</sup>; by 1972 this figure had dropped to 15%<sup>119</sup>. (A small survey conducted in Saskatchewan (N=738) indicated that of the sexually active 15-19 year old age group, condoms were used by 23% of the couples, although foam and condoms together were used by only 1%.<sup>120</sup>) Other research indicates that people naming many partners are less likely to use a condom than those persons naming only a few partners.<sup>121</sup>

This shifting and, in the latter case, somewhat disconcerting pattern of condom use must certainly have had an impact in rising gonorrhoea rates. If we return to the 3 P's postulate for a moment, we may recall that the Pill was given as a factor in increasing gonorrhoea rates, with its use explicitly correlated to promiscuity, the latter being the alleged cause of the higher rates. We can now clearly adduce that the Pill's influence on the rate of gonorrhoea had more to do with decreasing the use of prophylactic contraceptive methods than it had with increas-

ing female sexual gregariousness. [v]

The obvious control strategy utilizing contraceptive choice as an S.T.D. risk factor would be a massive promotion of condom use. Such a campaign was carried out in Sweden a few years ago with favourable results.<sup>122</sup> Other, more limited campaigns have been undertaken in such cities as San Francisco (particularly in the gay community), although no results of their effectiveness have been published. Public sentiment, unfortunately, can impede such a campaign under the dodge that it "encourages promiscuity". For example, a large billboard in Vancouver showing three boxes of name brand condoms with the simple copy, "Be Safe Instead of Sorry", has irked many citizens into demanding its removal because of its boldness. It would be useful in this situation for a government to augment the attempts of the condom manufacturing industry by launching its own "legitimizing" campaign on condom use; such a step, however, requires personal courage among politicians that would have to outweigh political safety, something which rarely occurs! Nonetheless, S.T.D. literature, posters, education programs and clinics can all encourage condom use, especially in conjunction with contraceptive foams, and especially among persons at greater risk due to frequent anonymous contact.

While condoms, foam and perhaps, to a limited extent, the diaphragm, may block disease transmission, other contraceptive methods may actually encourage infection. The jury is

still out on the Pill, but it is in on the IUD and the verdict is "guilty". IUD strings extruding through the cervical os into the vagina act as "ladders" for foreign organisms<sup>123</sup> allowing them to rapidly enter the uterus and fallopian tubes and set up a pelvic infection which, barring the presence of an IUD, might not have otherwise occurred.<sup>124,125</sup> There is also some concern that copper models of IUD's, by altering the pH level of the endocervix, may encourage the rapid growth of some pathogens, e.g., Hemophilus vaginalis.<sup>126</sup> Women using IUD's should therefore be educated as to their potentially greater risk, if not of infection per se, then of a more rapid development of pelvic inflammatory disease.

#### D. QUALITY OF INTERPERSONAL COMMUNICATION

This risk factor is a different and fundamentally more sound way of describing what the sexual moralists were after in their model of S.T.D. The quality of communication between sexual partners as it relates to S.T.D. risk can be summarized in the following fashion:

##### Poor Communication

- \* The double-standard, i.e., dishonesty about a commitment to monogamy. This results in one person contracting an infection and lying about it to his/her spouse and/or the clinic or physician, making early contact notification and treatment difficult. It also makes many physicians wary about reporting the cases they treat, in that the age group they see is likely predominated by persons

supposedly in a stable monogamous relationship.

- \* Fear or embarrassment between partners can inhibit open discussion on the risks of S.T.D. infection, methods of prevention, and so on. Again, this could result in perpetuating the stigma surrounding S.T.D.'s and limit the ease with which potentially infected partners are notified.
- \* The ideology of male superiority which, although under some duress in recent years, is still rampant. Some men coming into S.T.D. clinics are positively livid with anger at "that damn broad" who gave them a dose. Such an attitude does nothing to aid in getting that damn broad in for examination and treatment.

#### Good Communication

Good quality communication essentially reverses the above, allowing for discussion of such things as monogamy vs. non-monogamy, the use of barrier contraceptive methods if partners regard one or both persons as "high risk", questioning recent signs of infection or the date of the last S.T.D. checkup with a new partner before love making, prompt notification of potentially infected partners, checkups or symptomatic diagnosis undertaken simultaneously by both partners, and so on. This could eventually lead to a generally enlightened attitude in which the "secrecy" rule surrounding S.T.D. (still reinforced by S.T.D. clinic's admittedly necessary policy of strict confidentiality) might disappear.

## E. CONTACT NOTIFICATION

Although defects in the contact-tracing system are most pronounced in terms of the "environment", i.e., physicians and government clinics, and will be discussed in the next part, the individual "host" also plays an important role in providing good contact information in the first place. In British Columbia we are averaging only 0.7 named contacts for each new case of gonorrhoea<sup>127</sup> which means that, at best, only 70% of all infected persons are capable of providing enough information to allow notification of only one potentially infected partner. Since S.T.D.'s are not party to a dyadic relationship—either one of two uninfected partners requires a third infected contact to introduce the disease—the current state of contact information only allows us to reach perhaps 1/3 of all potentially infected persons. It is probable that poor contact information is a result of either anonymous exposure, or poor (i.e., dishonest) relationship communication leading to the withholding of contact information.

A common belief among some health professionals is that gay men, because of their penchant for steam baths and multiple contacts, produce poorer contact information than heterosexual men.<sup>128</sup> In a short survey I had one of the epidemiological workers in the Vancouver V.D. Clinic undertake, I found this belief to be untrue. The following Table outlines the results.



	Complete <sup>i</sup>	%	Partial <sup>ii</sup>	%	None <sup>iii</sup>	%
Heterosexual (N=102)	37	36	15	15	50*	49
Homosexual (N=72)	28	39	21	29	23**	22
Total (N=174)	65	37	36	21	73	42

i: full name, address, business or home phone

ii: first name, plus business or home phone or address

iii: first name and/or description only

\* includes one patient who refused to name female contacts who were family members

\*\* includes seven persons with anonymous steambath contacts and one prostitute

TABLE 2: COMPARISON OF MALE HETEROSEXUAL AND HOMOSEXUAL CONTACT INFORMATION, Vancouver Clinic, Sept. 1979

The next table, taken from the 1979 Annual Report of Division of V.D. Control (Victoria, 1980, p.19), also indicates that homosexual males provide slightly better contact notification than heterosexual males (specific to syphilis cases).

Table 3. ANALYSIS OF INFECTIOUS SYPHILIS CONTACTS<sup>1</sup>, BRITISH COLUMBIA, 1978 AND 1979

New Notifications	Category	Year #	Number	Named Contacts			
				Total Number Named	Total per Notification	Number Treated	Percent of Total Named
Homosexual		1978	139	229	1.6	99	43.2
		1979	173	351	2.0	164	46.7
Heterosexual		1978	66	85	1.3	35	41.2
		1979	70	127	1.8	42	33.1
Total		1978	205	314	1.5	134	42.7
		1979	243	378	1.6	206	54.5

1. Contacts named by new cases of primary, secondary, and early latent syphilis, excluding 58 contacts in the Province who were named by patients investigated outside British Columbia in 1978 and 57 in 1979.

(source: Division of V.D. Control; Annual Report 1979)

The basic strategy to improve the quality of contact information would be to promote the fullest use of the proverbial black book and constantly utter the new "moral" dictum: Know not just your partner, but also his or her name, address and phone number.

Strategies outlined in the discussion of all the above risk factors can be applied via the mass media and educational programs to the population-at-large, or more selectively to particular target groups. The former approach is outlined and evaluated in Chapter Five; an example of the latter is currently in operation in one of Vancouver's gay steambaths.

Initially undertaken by S.E.A.R.C.H. (Society for Education, Action, Research and Counselling on Homosexuality), a relatively non-political gay community group which sponsors a drop-in S.T.D. screening clinic for gay men staffed by gay nurses and physicians, this program attempts to publicize the risks of S.T.D. within the steambath itself. Pamphlets addressing S.T.D. risks and the gay man and cards giving S.T.D. clinic locations and hours are on display on the manager's counter. One evening each week (usually during peak hours of midnight to 3 a.m.) a volunteer gay male nurse offers free screening tests for syphilis and gonorrhoea. There has also been talk with the steambath owner on installing a condom vending machine and several large posters discussing proper condom use, oral-anal sexual hygiene (a factor in reducing sexual transmission of enteric infections) and the need to know one's partners' first

names and phone numbers. S.E.A.R.C.H. is also persisting in establishing an annual "Come Clean" week during which a concerted effort to screen high-risk gay males would be made, with men who have either been found free of S.T.D. or been effectively treated given an "I'm Clean" button with a date indicating their last checkup to display on their towels in the steambaths. Finally, there has also been a somewhat facetious suggestion to develop steamboof address books and waterproof luminescent pens suitable for a busy night's note-taking.

#### F. CONFOUNDING RISK FACTORS

It should be noted that in my discussion of risk factors related to the host I did not include age, occupation, marital status, city or rural residency, or "repeater" categories frequently used to assess risk.<sup>129</sup> I do not deny that, when considering the population as a whole, these demographic groupings do provide us with rough guide posts. Only to the extent that one particular group engages in the specific risk behaviours described above, however, does it place members at a greater risk of infection relative to another group. For example, a 45 year old married professional male with university education who engages surreptitiously in frequent anonymous sexual contact without using condoms is at enormously greater risk of infection than a 24 year old single homosexual male with Grade 10 education who has only 2 or 3 partners in a year and who uses a condom until he can trust his partner enough about the presence

or absence of an infection. The S.T.D. canvas of risk, when painted with a broad demographic brush, nevertheless places the former at a lower risk than the latter.

A practical example of how such demographic categories can be counterproductive when used unwisely concerns risks attributed to age. Statistics from V.D. control programs over the past decade indicate that males aged 20-24 and females aged 18-22 constitute the greatest risk group by virtue of being overrepresented in the incidence of reported cases of gonorrhoea. The Table below from the 1979 Annual Report of the Division of V.D. Control (Victoria, 1980, p.15) is representative of most North American control records.

Such data tends to be used to isolate the age-groups as being a highly significant risk factor, with the explanation that men and women at a particular age tend to have more "casual" partners, which has given rise to the belief that S.T.D. is primarily a phenomenon of youth. (This fits very snugly with the prevailing sexual ideology of men sowing their wild oats before settling down to morally uplifting monogamy.) Such data has also been used to justify S.T.D. promotion and educational programs geared to the youth market with at least three counterproductive consequences. First, it can stigmatize the teenage and young adult population, which may hinder as much as help in promoting preventive measures. In particular, governments may be viewed by many young adults as being paternalistic at best, and campaigns singling them out as the focus

Table 4. NEW NOTIFICATIONS OF VENEREAL INFECTION  
BY AGE-GROUP, SEX, AND DIAGNOSIS,  
BRITISH COLUMBIA, 1979

Age-Group	Sex	Total Gonorrhoea	Syphilis								Other Venereal Disease	TOTAL	
			Total Syphilis	Primary	Secondary	Early Latent	Late Latent	Cardiovascular	Neurosyphilis	Other (acquired)			Congenital
Under 15 Years	T	42	1	-	-	-	-	-	-	-	1	-	43
	M	9	1	-	-	-	-	-	-	-	1	-	10
	F	33	-	-	-	-	-	-	-	-	-	-	33
15 - 19 Years	T	1,542	6	2	-	3	1	-	-	-	-	-	1,548
	M	600	4	2	-	1	1	-	-	-	-	-	604
	F	942	2	-	-	2	-	-	-	-	-	-	944
20 - 24 Years	T	3,227	45	8	9	19	9	-	-	-	-	-	3,272
	M	1,956	36	8	9	13	6	-	-	-	-	-	1,992
	F	1,271	9	-	-	6	3	-	-	-	-	-	1,280
25 - 34 Years	T	3,276	119	25	30	53	10	-	-	-	1	1	3,396
	M	2,464	102	22	27	47	6	-	-	-	1	1	2,567
	F	812	17	3	3	6	4	-	-	-	1	-	829
35 - 44 Years	T	786	68	20	13	26	9	-	-	-	-	-	854
	M	675	64	19	13	25	7	-	-	-	-	-	739
	F	111	4	1	-	1	2	-	-	-	-	-	115
45 - 54 Years	T	200	36	9	6	14	3	-	3	-	1	-	236
	M	176	31	9	4	13	2	-	3	-	-	-	207
	F	24	5	-	2	1	1	-	-	-	1	-	29
55 - 64 Years	T	42	14	1	2	1	7	-	3	-	-	-	56
	M	33	9	1	2	1	3	-	2	-	-	-	42
	F	9	5	-	-	-	4	-	1	-	-	-	14
Over 64 Years	T	9	9	-	-	1	6	-	2	-	-	-	18
	M	9	5	-	-	1	3	-	1	-	-	-	14
	F	-	4	-	-	-	3	-	1	-	-	-	4
Not Stated	T	337	1	-	-	1	-	-	-	-	-	-	338
	M	196	1	-	-	1	-	-	-	-	-	-	197
	F	141	-	-	-	-	-	-	-	-	-	-	141
Total	T	9,461	299	65	60	118	45	-	8	-	3	1	9,761
	M	6,118	253	61	55	102	28	-	6	-	1	-	6,372
	F	3,343	46	4	5	16	17	-	2	-	2	-	3,389

(source: Division of V.D. Control, Annual Report 1979)

of the S.T.D. epidemic may be discarded as righteous intrusion. Second, the older population is reinforced in their quieting assumption that they are not at great risk, and need not be concerned with preventive measures or with the new information on such previously undiscussed S.T.D.'s as herpes, trichomoniasis and yeast. Third, such campaigns, by catering to a youthful audience only, leave themselves open to criticisms from the Moral Majority and their ilk for fostering promiscuity.

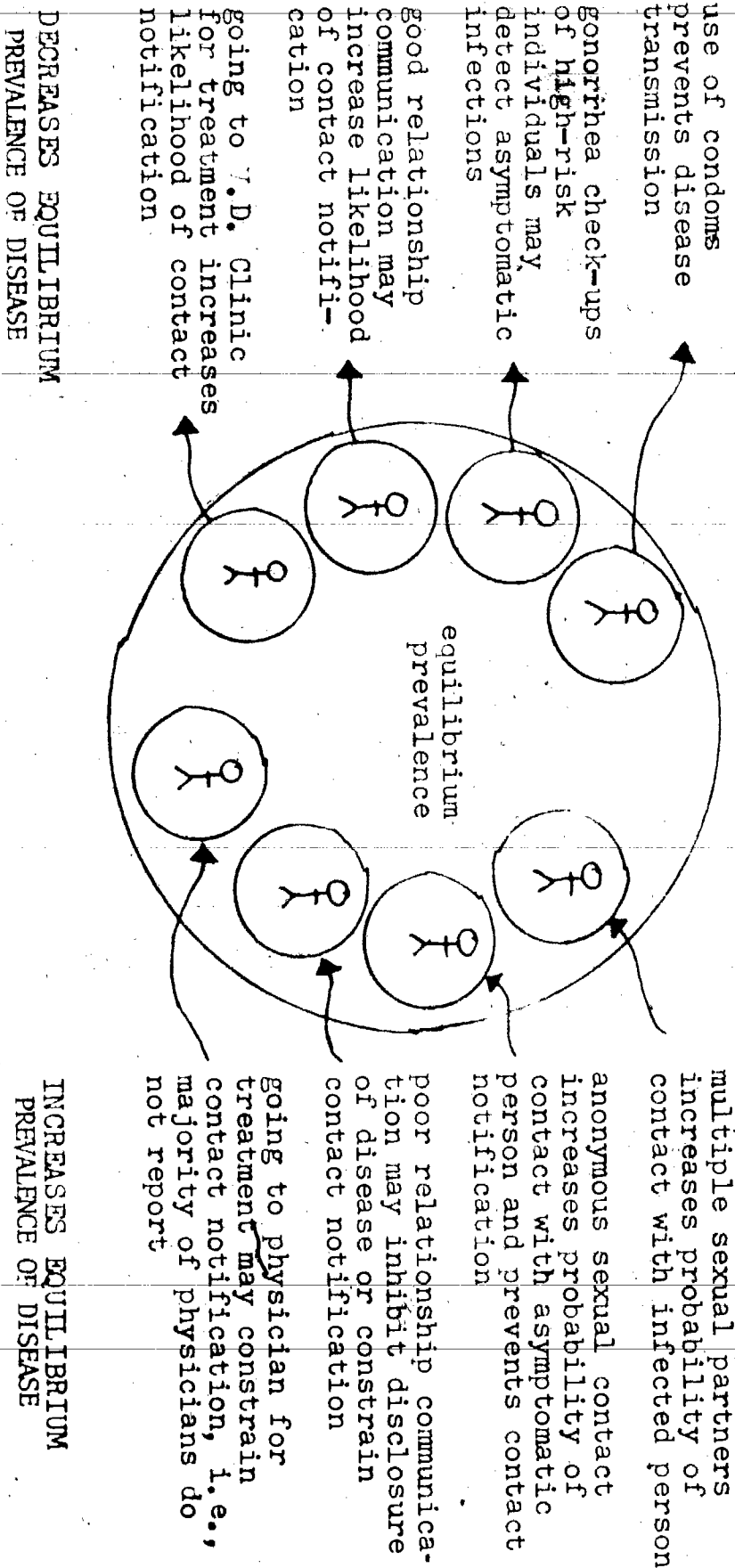
Figures on age-specific infection rates can also be misleading. I have already discussed this problem in relation to shifts in the population rate of the 15-34 year old age group. Furthermore, age-specific rates reflect only reported cases, and there is ample evidence that the majority of unreported cases are those treated by physicians—a point which will be returned to in the next part. It is possible that the population of S.T.D. patients going to a physician rather than a clinic (where all cases are reported) might tend to be older. First, older patients have had more time to establish a relationship with a physician other than their childhood "family" doctor whom most people would probably be reticent to go to for S.T.D. treatment. Second, public health clinics (at least in B.C.) became a truly visible and widespread phenomenon after the War and the post-War baby boom. People growing up in the 1950's and 1960's may be more likely to use public health clinics than people growing up in earlier decades for whom such facilities were less commonplace. Third, the S.T.D.

education received by persons over 35 is more likely to have been punitive than that received by younger adults, leading to a greater desire for privacy when dealing with the problem, a feature more endemic to physicians' offices than to public V.D. clinics. In sum, the available data on age-specific disease incidence may reflect a bias in the two systems of S.T.D. treatment—clinics and physicians—such that persons over the age of 35 are under-reported.

My sentiment as a health educator who first began to tackle the problem of promoting preventive measures in S.T.D. control while still a member of the third-ranking age-specific risk group (25-35) is that demographic categories of risk should only be discussed in relation to the specific risk factors previously outlined in this part. They must be used with cautious discretion, something I have often found lacking among older colleagues and within much of the professional and public S.T.D. literature.



ILLUSTRATION 6: Host Response and Equilibrium Prevalence



#### Part Four: The Environment

The environment is the social context in which both disease organism and host meet, thrive and are dealt with; its impact and intervention strategies in the disease process are both general and specific.

In a general sense, the environment conditions the specific behaviours of the disease organism and the host. In the former case, the fact that S.T.D. research funding (on a per case basis) is much lower than funding accorded less moralistically sensational diseases as multiple sclerosis, muscular dystrophy and arthritis has an undoubted impact on the speed with which improved prophylaxis (especially the development of vaccines) may be developed.<sup>130</sup> In the latter case, the extent to which S.T.D. remains a "blight" of any kind, rather than a potentially serious and very prevalent infectious disease, will impede individual's willingness to change specific behaviours that allow for prevention, rapid treatment and comprehensive contact notification. The issue of de-stigmatizing S.T.D. is inherent in the discussion of health promotion programs in the next chapter; this particular part of my argument will focus on an environmental "specific": the complex and, in North America, fairly botched system of contact notification.

#### A. CONTACT NOTIFICATION

The necessity of some method of drawing gonorrhoea contacts into treatment has already been discussed. So, also,

has the host's responsibility in this regard, i.e., the need to always know one's partners' names, addresses and phone numbers. The environment falters, in turn, on at least two counts. First, while many physicians and most control program Directors remain unconvinced that contact notification has any value in actually curbing the epidemic<sup>131</sup>, there is nonetheless a general research consensus that such notification is not only essential, but even cost-effective in reducing the morbid sequelae of undetected infections.<sup>132</sup> Second, even after the host has upheld his/her end of the stick by providing proper contact information, the effectiveness of the medical system's role in contact-tracing is only fair at best and, respecting private physicians, often entirely neglected.

The control program in use in British Columbia (and in modified forms elsewhere in North America) utilizes "epidemiological workers" who actively trace people named by persons with confirmed infections. (Two full time epid workers operate in the main B.C. provincial clinic in Vancouver, while community health nurses handle the job throughout the rest of the province.) The usual procedure is to interview a male patient after he has been examined, eliciting the names and addresses of his partners. Females, unless diagnosed as positive cases, are not interviewed for contact information; even when they have been diagnosed positive there is disagreement as to the cost-effectiveness of tracing their male contacts.<sup>133,134,135,136,137</sup> If a gonococcal infection is confirmed in the male

patient, contact information is taken on all partners with whom he has had sex within the preceding 30 days, a time period based on the outside estimate of the disease's incubation period. The patient is then asked whether or not he would be willing to contact his partners himself. If he agrees, he is given a few days "grace" in which to do so. If his partners do not show up within that period of time, the patient is contacted by an epid worker to confirm if he has, indeed, informed them. If not (or if he has and his partners are simply not seeking treatment) the epid worker begins notifying them directly. By law, no information can be divulged to the contacts concerning how their names were obtained or when an alleged exposure to the disease took place. The epid worker simply states: "You have been named as a contact to gonorrhoea. When can you come in for treatment?" If the person hasn't as yet sought treatment on his/her own (unlikely if he or she had an asymptomatic infection) an appointment is arranged, with persistent phone calls, letters or visits if the appointments are not kept. Under the British Columbia V.D. Suppression Act, contacts are liable for fines and/or imprisonment if they fail to seek treatment. The power of this Act has only been invoked once or twice, and most persons, when informed of potential infection, are quick to avail themselves of treatment. [vi]

There is mounting criticism that such a contact-tracing strategy "is an inefficient use of resources."<sup>138</sup> Two studies

with a combined sample size of 2,127 patients found that a self-referral system was equal in effectiveness to the contact-tracing system utilizing epid workers.<sup>139,140</sup> The self-referral method, which is also widely used throughout the United Kingdom of over 200 specialized S.T.D. clinics, involves a very brief interview (30 seconds to two minutes) with the primary patient, providing him/her with a number of referral cards equal to the number of his/her potentially infected partners. The primary patient is also given the following exhortation:

At least one, and perhaps all of these people are infected with gonorrhoea, but they probably don't know it since gonorrhoea doesn't often cause symptoms. It is your responsibility to see that each one of them is told to get treated. These cards will help. If your partners come to this clinic... treatment will be free and confidential. We will not tell them who you are. <sup>141</sup>

The cards alert partners to the likelihood of infection and indicate where they can seek treatment. They are urged to return the cards to the clinics so that a cross-check on the system's effectiveness can be made. One of the studies found that, while it may be disconcerting to control program staff when only one or two contact referral cards turn up for a patient originally given seven, the remaining five still sought treatment.<sup>142</sup> The card served as a motivating factor in getting the primary patient to inform his/her partners, whether or not patient or partners placed any importance in the cards themselves.

This self-referral system costs approximately 65¢ per case, versus a cost of \$42.25 per case when an epid worker is involved

in the tracing procedure.<sup>143</sup> Although self-referral meshes nicely with campaigns urging individuals to know their partners' names, addresses and phone numbers, and to always ensure that they are notified of potential infections, it has not been incorporated into most North American control programs. It is not, for example, used in British Columbia. One possible reason is that it removes the element of "control" from control program workers themselves and places it on the infected person.<sup>[vii]</sup> Yet, as both studies on self-referral pointed out, people do behave responsibly, and at least as many contacts who are traced by epid workers come in of their own accord. To employ this system (indeed, even to conduct a local study on its efficacy) would be simple and inexpensive. It would also free up epid workers' time to trace those contacts for whom information is scanty. In particular, epid workers could be used in more critical areas, such as syphilis notification or tracing of all contacts to penicillinase-producing N. gonorrhoea. (cf. Appendix One for a description of this particular strain of gonorrhoea.)

Despite the limitations of a self-referral system, it should be undertaken if for no other reason than the current contact-tracing system is terribly inadequate.<sup>[viii]</sup> In British Columbia, for example, we are averaging only 0.7 named contacts for each new case of gonorrhoea, and are successful in tracing and treating only 38% of these contacts.<sup>144</sup> While it is true that many named contacts have probably sought treatment

independent of notification, we are not reaching as many as 87% of all potentially infected partners of reported cases alone. Overcrowded facilities and inadequate staffing are obvious program deficiencies which could be corrected and improve both the quality of care and the efficiency of either a self-referral or contact-tracing system. In recent years in B.C. (1978-1980) clinic attendance has risen quite dramatically taxing already burdened services. The control strategy should have been to increase services to meet the demand; instead, the promotion program which had been largely responsible for the attendance increase was aborted by the Director of the Division of V.D. Control specifically because the patient load had become too great for the facilities. [ix]

In February 1981, the main clinic in Vancouver, still experiencing a patient load almost 40% greater than in pre-promotion years, switched from a drop-in to an appointment system. Although contact diagnosis and treatment, follow-up visits and routine S.T.D. checkups may lend themselves to appointments, a symptomatic individual will probably seek alternate care rather than wait even a day or two for an appointment. (Alternate care in this situation would likely mean a private physician which, as we will see in a moment, often exacerbates even further the problem of contact notification.)

In sum, an expansion of clinical services (especially in rural areas which, historically, have been poorly served by V.D. control programs), improved clinic hours (most clinics

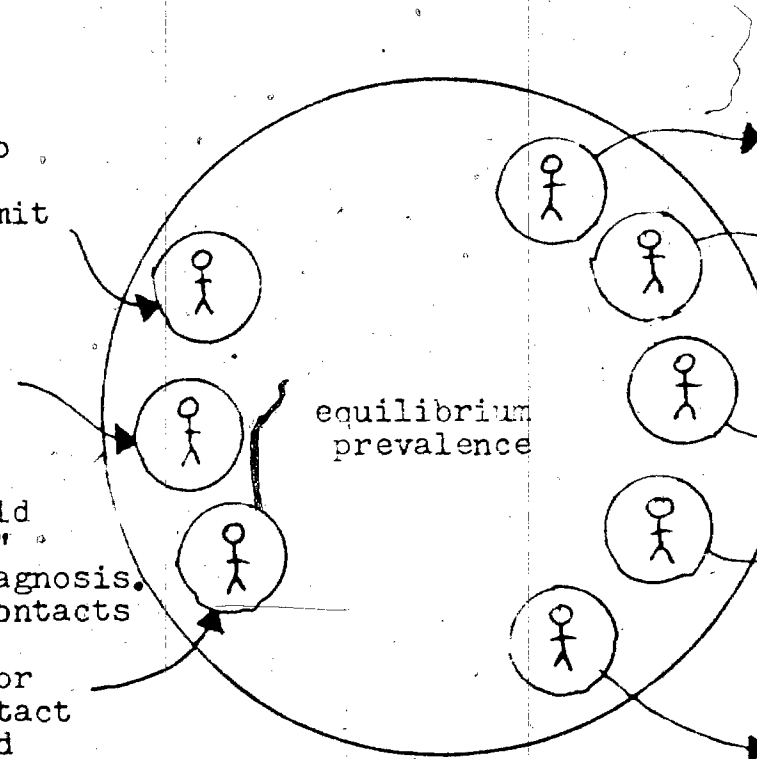
ILLUSTRATION 7: Environmental Response and Equilibrium Prevalence--V.D. Clinics

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understaffing, poor location & hours, no publicity and poor credibility could limit attendance

lack of innovative notification systems (e.g. self-referral) could reduce contact notification

poor lab support could necessitate "shotgun" treatment without diagnosis. Without diagnosis, contacts cannot be required legally to come in for treatment, hence contact notification impaired



increasing number of clinics and staff, with health promotion publicity will increase attendance

self-referral notification in addition to contact-tracing may increase number of contacts coming in for treatment

proper lab support aids diagnosis, hence contact notification

promoting condom use could decrease risks of disease transmission

health promotion may destigmatize the disease, increasing the speed of clinic attendance and the ease of contact notification

INCREASES EQUILIBRIUM PREVALENCE OF DISEASE

DECREASES EQUILIBRIUM PREVALENCE OF DISEASE



currently have limited weeknight and weekend operations, making it difficult for working persons to attend), increased staff, introduction of self-referral notification procedures in addition to "classical" contact-tracing, extensive promotion and education campaigns and improved laboratory facilities<sup>[x]</sup> constitute just some of the measures that can be taken by governments to improve the services they offer and, hence, reduce the risks of disease inherent in a sloppy medical intervention system.

#### B. PHYSICIANS AS PATHOGENS

Physicians who do not report cases of S.T.D. which they treat (as required by law) are, as a venereologist colleague of mine quipped, "worse pathogens than the organisms themselves." Such an indictment is based upon the need for contact notification which, when a physician-treated patient isn't reported to public health workers or referred to a V.D. clinic, is nipped in the bud.

Between 70 and 80% of all gonorrhoea cases in the United States are treated by physicians, with only 15 to 20% of physicians reporting their cases to public health authorities and physician-initiated contact notification "variable" at best.<sup>145</sup> Similar data does not exist for Canada, although in British Columbia physicians treat 47% of all reported gonorrhoea cases, and there is evidence of at least several hundred additional cases which they treat and do not report.<sup>146</sup> [xi] Several theories abound as to why physicians do not report

gonorrhoea cases. The most common argument advanced by doctors themselves is that they must protect the confidentiality of their patients. But, as I have commented elsewhere:

Under the Hippocratic oath, the bond between physician and patient is both sacred and confidential. Unfortunately, the oath pre-dates medical knowledge of the nature of infectious diseases and their transmission. As soon as the basis of disease transmission was understood, control measures of various kinds were undertaken.....When physicians today invoke this particular clause of their oath they are reacting to the centuries of moral judgements that enshroud and confound the problems of V.D. control. How many physicians, for example, have any reservations about reporting infectious diseases other than V.D.? 147

Physicians, in truth, only seem reticent to report gonorrhoea. As Roberts has pointed out, one reason that syphilis rates are so low while gonorrhoea rates remain extremely high is that "many physicians consider the medical significance and control of syphilis quite different from that of gonorrhoea."<sup>148</sup> In short, gonorrhoea is not taken to be a particularly serious illness. As the physician in charge of the V.D. control program in Nova Scotia wrote in 1979: "...the fact that the long term sequelae of...gonorrhoea are not usually severe (unlike syphilis) and threaten few lives, it could be argued that gonorrhoea should not be separated out from the other minor infectious diseases in medicine but should be left to the usual methods of the private physician,"<sup>149</sup> This attitude may well be consequent to the great campaigns of the 1950's sponsored by government health branches (notably that of Thomas Parran, Surgeon-General during this period<sup>150</sup>) to purge the scourge of syphilis from the land.

No similar campaign has been undertaken to broadcast the extreme morbidity of untreated gonorrhoea, and the disease is still regarded by many physicians as a fairly trivial infection. It's also probable that physicians, like other ordinary mortals, are subject to the same moral prejudices that have impeded people from seeking treatment in the first case, and which may colour individual physicians' desire to intervene in a disease which the patient only "brought upon" him- or herself.

In either case, patriarchal prejudice cannot be ruled out as another contributing factor in physician non-reporting. Women are less likely to be symptomatic than men and benefit greater from contact-tracing or notification.<sup>151</sup> Most gonorrhoea patients presenting themselves to physicians are likely to be male. Corea has argued that the sexist conditioning of men, and particularly that of male physicians<sup>[xii]</sup>, contributes to their unwillingness to make patient reports that are mostly beneficial to asymptotically infected women.

Other factors abetting the problem of physician non-reporting also include:

- \* Insufficient payment to physicians for their time in completing report forms.
- \* Resentment at intrusion into their "private practice" by government regulations.
- \* General ignorance of gonorrhoea and its management.<sup>[xiii]</sup>
- \* Fear of becoming embroiled in a marital dispute. (The V.D. Suppression Act of British Columbia, however, provides

that records of V.D. treatment are "exempt from production upon subpoena issued in any Court in a civil action."<sup>152</sup> I suspect legislation in other provinces and states contain similar provisions.)

\* A belief that contact notification plays little role in stemming the epidemic.<sup>153</sup>

This last point is of particular interest, since it can be demonstrated that contact notification does have a dramatic impact on the prevalence of gonorrhoea. For example, in 1973 the gonorrhoea rate in the United Kingdom was 126 cases per 100,000 population.<sup>154</sup> In Britain there are 230 S.T.D. clinics<sup>155</sup> which see 90% of all gonorrhoea patients; of the remaining 10% seen first by physicians, 90% are referred to S.T.D. clinics since there is no financial benefit for a physician to see these patients.<sup>156</sup> [xiv] Thus, some 99% of all gonorrhoea cases are seen in a specialized public clinic where contact follow-up involves both a self-referral and an extensive contact-tracing network.<sup>157</sup> The reported gonorrhoea rate in the U.K. is considered to be close to the actual rate.

In the same year (1973) in the United States, the reported gonorrhoea rate was 404/100,000.<sup>158</sup> It is generally regarded that four-fifths of gonorrhoea cases in the United States go unreported<sup>159</sup>, giving us an estimated U.S. rate exceeding 1600/100,000, over 12 times the U.K. rate! In Canada in 1973, the gonorrhoea rate fell between the U.S. and U.K. extremes at 205/100,000<sup>160</sup>, although the four western provinces (considered

to have better reporting procedures) recorded rates from 357 to 433/100,000.<sup>161</sup> The B.C. rate was 381, which we could conservatively treble to get a more accurate measure of the actual disease incidence.

There are three major differences in gonorrhoea control distinguishing the U.K. system from the North American system. First, almost all cases are treated by specialized clinics attached to hospitals, allowing rapid access to laboratory facilities (cf. footnote [x]) and integration into the contact notification system. Second, because physicians are salaried rather than working on a fee-for-service basis, there is no economic incentive for them to treat S.T.D.'s, and the problem of physician non-reporting is side-stepped. Third, there is a constant S.T.D. health education program directed towards attracting people into the specialized clinics. While the situation in the U.K. is still regarded as imperfect, it is considered as being much more efficient than the control programs existing in North America.<sup>162</sup> [xv]

### C. COUNTER-STRATEGIES

While the British system offers a more effective control program than the one currently operating in Canada, Smith has pointed out that "since [its] effectiveness...is attributable in part to the method by which general practitioners are reimbursed for their services, simple transplantation to the Canadian scene is not possible."<sup>163</sup> In British Columbia several strategies have been attempted to redress the problem of

physician non-reporting within the constraints of a fee-for-service medical system, without too much success. These, and other ideas which have been considered but never acted upon, are discussed below.

### 1. Physician Education

To legitimize the control program's effort to improve physician reporting, an article was published in the B.C. MEDICAL JOURNAL in 1978, entitled "A New Control Program for the Elimination of the Gonorrhoea Epidemic in British Columbia." The title was a political misnomer; the article simply dealt with the existing control system and exhorted physicians to involve themselves in it. The article's summary was the least apologetically-worded section, and outlined in point form the gonorrhoea problem:

FACT: Every time a person is treated for gonorrhoea at least one or two other persons "out there" are also infected.

FACT: Many of these persons will have few, if any, early signs of infection. Women are hit the hardest. Over 85 per cent of infected females have no noticeable symptoms in the first several weeks. From seven to 20 per cent of males are also asymptomatic.

FACT: Over 30 per cent of infected females do not receive treatment until pelvic inflammatory disease has developed. Up to 30 per cent of women infected with PID will become sterile.

FACT: Thorough reporting, contact-tracing and epidemiologic treatment can reduce the gonorrhoea epidemic ten-fold.

FACT: Every physician must balance his or her refusal to participate in a concerted control program against his or her own role in:

- 1) furthering the gonorrhoea epidemic, and
- 2) allowing unnamed and untreated contacts to suffer serious physical damage concomitant to a gonococcal infection.

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(Note: the figures quoted above are overestimations, based on poor data of a few years ago.)

A one-shot effort such as a magazine article would obviously have little effect, yet any efforts on my part to promote physician involvement with the B.C. control program were stymied by the simple fact that I was not a doctor. Most of the effort to educate physicians has been made by the doctor with the V.D. clinic in Vancouver, usually consisting of short information sessions at various hospitals during medical rounds. The brevity of these talks, the difficulty of the clinic physician leaving his responsibilities at the clinic, and the fact that most doctors attending medical rounds on the subject of S.T.D. are likely already "converted" to the control program constrains the effectiveness of this effort to reach private physicians.

The clinic physician also supervises S.T.D. training for medical students and interns in the V.D. clinic itself; again, this is limited by the clinic physician's other responsibilities, and by the fact that a specialized clinical experience in S.T.D. diagnosis and management does not necessarily translate to the specific problems of a private practice.

In 1980 the Division of V.D. Control published its first thorough manual on the diagnosis, treatment and management of S.T.D.'s for use by physicians. A whole appendix of the manual was directed to simplifying the laboratory and reporting procedure in an attempt to engender more physician support in the control program. The manual was "mail-dropped" to almost all private physicians in the province (excluding those specialists

unlikely to see patients on a general practice basis), and has been quite well received. Nonetheless, physicians in B.C. (like physicians elsewhere in Canada) are presently engaged in a political and very significant struggle with government health ministries over fee schedules; there is some concern that the current system of medical insurance could be substantially eroded before the outcome of this struggle is determined. In this context, any promotion by the government to encourage physician support and government programs is sure to be undercut by the strained relationship between the two parties. Furthermore, none of the education strategies outlined above can, by themselves, guarantee any improvement in physician reporting.

## 2. The Nurse Epidemiologist

Although all community health nurses employed by the Ministry of Health have a mandate to support the V.D. control program, the Division of V.D. Control also funds full or part-time nurses in eleven B.C. communities, excluding the Vancouver area which is serviced by the province's largest V.D. clinic.<sup>165</sup> The intent of this particular program is "to provide the private physician with one simple, reliable and efficient manner in which to execute his or her function in the control program.

The public health nurse responsible for V.D. in each specific community, in effect, is there to serve both the community and the private physician in her role as a direct link between physicians and the V.D. control program.....[Her role] is to make her services available [to physicians] with respect to interviewing, contact-tracing and/or epidemiological treatment of named contacts [to primary cases seen by physicians]. 166



No studies have been conducted to verify whether or not the presence of a nurse epidemiologist working in a community actually increases physician reporting. One problem that some nurse epid workers have experienced is a medical elitism preventing them from working directly with physicians. The latter, it seems, would prefer to relate to one of their own kind, in this case the Medical Health Officer of a health district. Another probable constraint, identified by the Koba study in the United States<sup>167</sup>, is that physicians may prefer to have epid workers responsible directly to themselves rather than to public health authorities so that their control over patient care and confidentiality remains intact. In such a situation simple statistical reporting to public health authorities could be substituted for the current practice of detailed case-reporting. The latter would be redundant since the physician-controlled epid worker would ensure contact notification and the statistical reporting to authorities would still permit surveillance of disease trends. Smith has argued that physicians would not be hesitant to cooperate in statistical reporting as they are with case-reporting.<sup>168</sup>

Consideration was given to selecting a B.C. community and providing a grant to the local medical association to hire their own nurse epid worker. Shifts in statistical reporting for this community would have been compared to prior case-reporting figures, and to communities where a nurse epid worker was employed by the government or where neither situation existed.

This research proposal was never acted upon.

### 3. Self-Referral Kits

In the spring of 1981 the Division of V.D. Control published pamphlets on S.T.D. designed to inform patients with a particular disease on the medical, therapeutic, preventive and epidemiological aspects of their infection. These could be distributed to physicians who see S.T.D. patients in conjunction with self-referral cards for their contacts. The physician could report each positive case she or he treats, plus the number of potentially infected contacts, i.e., statistical rather than case-reporting. If the self-referral forms were assigned a number corresponding to each physician, some cross-checking on such a system's reliability could be designed. In the absence of complete case-reporting by most physicians, this system may prove very useful.

### 4. Payment for Physician Reports

It is sometimes thought by V.D. control program workers that many physicians do not report because there is no fee schedule covering the cost of the time it takes to fill in a report form. The Division of V.D. Control has discussed implementing a payment schedule for report forms on a trial basis, although has yet to act on it.

### 5. Bypassing the Physician

At one point during the two and a half year health promotion program, I deleted reference to "physicians" as a diagnostic and treatment resource and publicized only the government V.D.

clinics. While it is doubtful that this had any impact in channelling patients away from doctors and to the clinics, it did spark criticism from the B.C. College of Physicians and Surgeons, which argued that our promotion of clinic services (the staff of which included a physician on salary with the government) contravened their regulations on professional advertising. Their argument was shown to be legally specious, and they retreated from their position as soon as we resumed advertising private physicians as well as government clinics. Until the government supplies sufficient clinical services and staff there is little to be gained in efforts to bypass the private practitioner; furthermore, many persons would likely choose to be seen by their own doctor rather than by a clinic, and the government has no ethical or legal right to force a choice upon the public.

Nevertheless, the politics of physician-government relations may well confound attempts to increase government clinic services in the near future. For example, despite the fact that a majority of private physicians do not manage gonorrhoea in an epidemiologically sound fashion, a letter drafted by the assistant Deputy Minister responsible for the British Columbia V.D. control program (in response to the criticisms made by the College of Physicians and Surgeons) stated in part that "It is our policy that we first promote the private physician as the source of medical care, and secondly promote any other facilities that may be available."<sup>169</sup> That Health Ministry officials in

a position to actively lobby for rapid expansion of government clinical services are physicians themselves, and that physicians continue to be paid on a fee-for-service basis may both conspire to impede the development of a network of S.T.D. clinics as permanent medical institutions in this province.

#### 6. Prosecution

Section Three of the V.D. Suppression Act states that:

Every physician and every superintendent and other responsible head of a place of detention shall maintain a record of all persons suffering from venereal disease coming under his treatment or supervision, and shall report on a prescribed form by name every such person, stating the disease from which he is suffering in the manner prescribed by regulations.

and in Section Five, subsection three, further states that:

A physician who fails to report as required by this section is guilty of an offence and liable, on summary conviction, to a penalty of not less than \$25 and not more than \$100. 170

Although the Division of V.D. Control has a "blacklist" of physicians who have treated gonorrhoea patients and not submitted a case-report (even after several phone calls from V.D. control program staff), no effort has been made to prosecute any of them. While it has been argued that this Section of the Act is unenforceable and, hence, prosecution should not be undertaken, it is more likely that control program officials, as physicians themselves, are remiss to take a fellow-member of their "self-regulating" profession to court. It is possible that prosecuting certain of the worst offenders may drive S.T.D. treatment "underground", i.e., physicians would no longer use government laboratories and would either obtain their diagnostic confirma-

tion from a private lab or base their diagnoses on less accurate clinical symptomology. On the other hand, prosecution, if only one part of a larger program to draw physicians into the control system, may work as an example that the government "means business" in its efforts to curb the gonorrhoea epidemic.

Other strategies that could be incorporated into such a program include:

- \* Payment to physicians for case-reporting.
- \* Use of self-referral kits in both physician and clinic offices.
- \* Experimentation with grants to local medical associations for retaining their own epid workers.
- \* Increased physician education.
- \* Radical expansion of government services and laboratory facilities to demonstrate the government's commitment to its responsibilities in an effective control program.
- \* A massive campaign directed not only to the host and the specifics of his/her behaviour, but also to physicians, emphasizing the seriousness of gonorrhoea and identifying their ethical, epidemiological and legal responsibilities in the control of S.T.D.

In sum, it is my opinion that, to this point in time, most control program activity not involved in the provision of limited clinical and epidemiological services has been devoted to promoting changes in the host's behaviour, largely ignoring the massive changes that need to be made in the way in which

the "environment" responds to individual cases of disease.

Indeed, using the United Kingdom system as a contrast, it is not an exaggeration to say that up to 90% of the incidence of S.T.D. (specifically, but not exclusively, gonorrhoea) occurs in large measure because of the medical system's inefficient intervention into disease control.

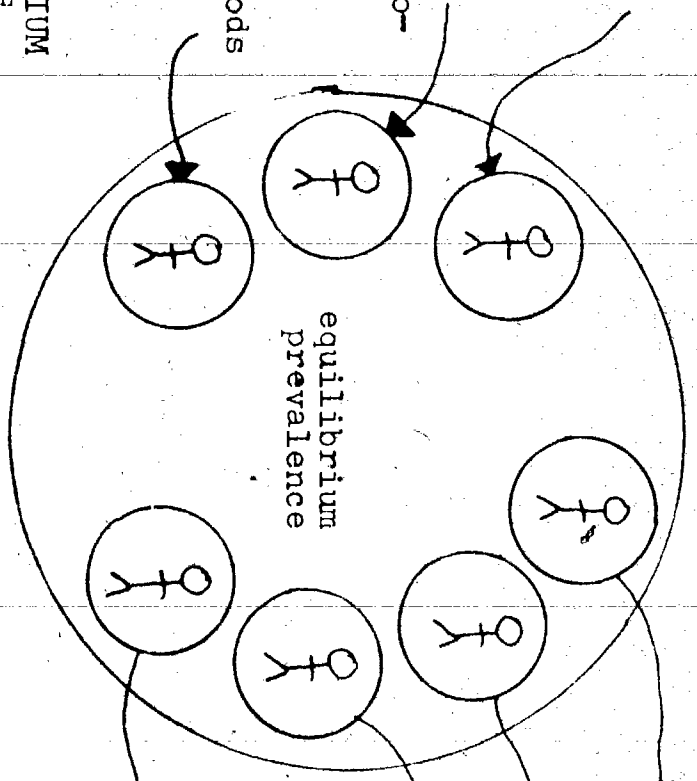
ILLUSTRATION 8: Environmental Response and Equilibrium Prevalence--Private Physicians

ignorance may lead to mis-diagnosis and inappropriate treatment

Lack of reporting prevents contact notification, especially of potentially asymptomatic contacts

bias favouring non-barrier contraceptive methods reduces use of prophylactic condoms

INCREASES EQUILIBRIUM PREVALENCE OF DISEASE



reporting allows, for contact notification by clinics

self-referral kits allow for contact notification by host

gonorrhoea screening for high-risk patients (particularly asymptomatic women) may detect asymptomatic infections

physician education may improve their support for control measures including contact notification

DECREASES EQUILIBRIUM PREVALENCE OF DISEASE

## FOOTNOTES TO CHAPTER THREE

- [i] Epidemiological models have recently been used in assessing a broad range of other phenomena which have been simultaneously labelled "social problems" and "illnesses", for example, sexual abuse, alcoholism, drug abuse, poverty and so on. I sense a grave danger in this in that it intimates applying a symptomatically-grounded cause-effect "medical model" to phenomena which appear more fundamentally linked to individual responses to societal structures, acculturation and pressures. In other words, there is the proverbial risk of merely addressing the symptoms and ignoring the cause. I left my work with the B.C. Alcohol and Drug Commission in 1976 for precisely that reason.
- [ii] It is curious how military jargon has permeated our concepts of disease. "Foreign" organisms "invade" and "attack"; people develop "resistance" using the body's "defense" system; there are "shots" which "kill" the enemy cell—note here how "cell" has crossed over from biology to political struggle. An entire V.D. film (V.D.—Counterattack!) uses the metaphor of war. It is possible that the either/or antagonism between two sides in a war (either good or bad, conqueror or vanquished) has inhibited Western medicine from adopting a more holistic model of disease. Allopathic medicine, for example, tends to address itself quite narrowly to "crisis intervention"—the heat of the battle—and, equipped with drugs, high technology and elaborate techniques, roots out and destroys the suspected cause of disease symptoms. Only recently have Western practitioners of allopathic medicine—i.e., medical doctors and their support staff of nurses, therapists, etc.—begun to examine more comprehensive models of disease intervention and prevention.  
cf. The Shifting Paradigm: From Disease Prevention to Health Promotion, Proceedings of a Conference held March 20-21, 1980, Robson Square Media Centre, Vancouver, B.C.; U.B.C. Continuing Education Department, Fall, 1980.
- [iii] Reported incidence by age groups used in calculating this rate were taken from S.T.D. Canada, 1976, Bureau of Epidemiology, Health and Welfare Canada, Ottawa, 1976; Table 2, page 9. This table concerns reported cases and rates by age for 1975 and 1976 only. As I have been unable to obtain similar breakdowns for all the years in question, I am using an average of these two years as a norm. Although specific age-case data by



separate year might alter the Table on page 81 somewhat, I do not believe it would change its basic "shape", i.e., invalidate my point. In B.C., for example, the 15-34 age group accounted for 77% of reported gonorrhoea cases in 1968, and 83% in 1976, a difference of only 5%. (Division of V.D. Control, Annual Reports, Ministry of Health, Victoria, B.C.; 1969 and 1978 respectively.) Finally, the 1975-1976 age-case table from which I calculated the gonorrhoea rate lumps the 30-39 age group under one category. To obtain the number of cases for the age group 30-34, I have simply divided the total 30-39 case number by half, again an imprecise procedure but one which does not implicitly confound my thesis.

- [iv] This last factor would logically cut into the impact that mobility and asymptomatic infections would have had on increasing the gonorrhoea rates. My defense is that I am not trying to prove why rates have consistently rises, but merely identify some of the factors which may have contributed to such a rise.
- [v] Criticism has been mounting against what is perceived as an overwhelming "Pill-pushing" bias on the part of private physicians and many government sponsored family planning clinics. There is considerable evidence that the Pill has many serious side effects (Hatcher etal, Contraceptive Technology 1980-1981, Irvington Publishers, New York, 1980, pp.22-25 and 33-38) and that, with proper instruction, the diaphragm or foam and condoms may be as effective in preventing pregnancy as the Pill. They would also substantially reduce S.T.D. risks (i.e., use of foam and condoms). cf. Hatcher etal, pp.5-7, and Judith Bruce and S. Bruce Schearer, Contraceptives and Common Sense: Conventional Methods Reconsidered, Population Council, New York, 1979, pp.26-35 for discussions on "professional" biases and oral contraceptive prescriptions; and Samuel Epstein, The Politics of Cancer, Vintage Books, New York, 1979, pp.214-240 for a discussion on the health and carcinogenic risks of oral contraception.
- [vi] Differences arise as to whether or not contacts, particularly females, should be diagnosed first and treated only if a confirmed case exists. Due to the poor reliability of laboratory tests for females (at best a 3-10% false negative rate), the B.C. program treats all female contacts without disease confirmation. cf. Franklyn Judson and Frederick Wolf, "Tracing and Treating Contacts of Gonorrhoea Patients in a Clinic for Sexually Transmitted Diseases", Public Health Reports, 93:5 (460-463), Sept.-Oct. 1978; and

P.E. Dans and F.N. Judson, "The Establishment of a Venereal Disease Clinic: II. An Appraisal of Current Diagnostic Methods in Uncomplicated Urogenital and Rectal Gonorrhoea", Journal of the American Venereal Diseases Association, 1 (107-112) 1975; and  
 E.S.O. Smith, "An Overview of Venereal Disease Programs in Britain, West Germany, Denmark, and Sweden, with Implications for Canada", Bulletin of the Pan American Health Organization, X:4 (321-332), 1976.

[vii] The fact that S.T.D. patients are always offered the option of having epid workers notify their contacts implies that, as far the control program strategy is concerned, these patients are likely too irresponsible to ensure contact notification themselves. While this may be true, it is also probable that the control program creates a self-fulfilling prophecy. What makes this even more puzzling is the manner in which National Health and Welfare, in its famous document, A New Perspective on the Health of Canadians (Ottawa, 1975), described syphilis and gonorrhoea as self-imposed risks resulting from irresponsible promiscuous behaviour and carelessness (page 17). It would seem more appropriate to define individual responsibility and S.T.D. control as the simple matter of always ensuring prompt contact notification.

[viii] Koba researchers, under contract to the U.S. Department of Health, Education and Welfare, proposed still another alternative to contact-tracing. Corea (op cit) summarizes it thus:

"The doctor or paramedic asks the gonorrhoea patients how many contacts they have had and explains how vital it is that they inform those contacts of their exposure to V.D. Then the medic gives them Gonorrhoea Patient Information packets for themselves and an appropriate number of Gonorrhoea Information Kits. The patients give one kit to each contact. The contacts read about the implications for getting a cure. To guard against an allergic reaction to the standard treatment, they then call a special public health department number and answer a health officer's questions about their medical histories. The officer gives the contacts authorization numbers which are coded prescriptions for the druggists. The contacts take the numbers to a distribution center and pickup their treatment, along with information on follow-up." (pp.132-133) While "this strategy eliminates the need for contact-tracing" it contains several risks. First, there is potentially fatal problem of missing an antibiotic allergy. Second, women with P.I.D. probably require longer treatment, and without diagnosis (i.e., a bimanual exam) P.I.D. may be overlooked. Third, it does not allow for diagnosis of other concomitant infections which may require alternate forms of

treatment. Also, it differs from the self-referral .133 system only in bypassing actual examination and diagnosis, which I do not think should be bypassed even if it may increase control program costs.

- [ix] Admittedly, the Ministry of Health as a whole was in the midst of a politically imposed "freeze" at this time, making it virtually impossible to expand facilities or staff.
- [x] Government laboratories in B.C. are highly centralized which, given the geography of the province, makes it extremely difficult for outlying areas to get specimens to the labs that are still viable. Furthermore, the labs suffer the same short-staffing problems as the V.D. clinics, and in one recent policy shift the labs decided to read only one of two slide-smears submitted for female patients. The result of this time-saving strategy would have led to a substantial increase in missed (i.e., false-negative) cases of gonorrhea and trichomoniasis. After discussions between the Division of V.D. Control and the Division of Laboratories, the policy reverted to readings of both slides.
- [xi] This evidence constitutes positive cases of gonorrhea reported by the provincial laboratory to the Division of V.D. Control, the lab tests of which were requested by private physicians who, when asked to supply a patient report, refused to do so. As many physicians use private rather than provincial laboratories, and many more are suspected of not using laboratories at all, the evidence we have of physician non-reporting is the proverbial tip of the iceberg.
- [xii] On this point, see also P. Susan Stephenson and Gillian A. Walker, "Psychotropic Drugs and Women", Bioethics Quarterly, 2:1, Spring 1980; and Diana Scully, Men Who Control Women's Health: The Miseducation of Obstetrician-Gynecologists, Houghton-Mifflin, Boston, 1980.
- [xiii] This may correlate to the historical "undertreatment" of women for this disease. Over a century ago it was discovered that pelvic inflammation in women could be caused by infections such as gonorrhea, but this knowledge slipped like quicksilver through the texts of medical opinion. As one medical historian wrote "It was realized that gonorrhea might effect women, but it was not regarded as important." Personal experiences of women friends and reports from different V.D. clinics have led me to conclude that the same attitudes and ignorance persist among some physicians today.  
cf. Gena Corea, The Hidden Malpractice, Jove Publications, New York, 1979; Chapter 6, "Venereal Disease".

[xiv] "Under the provisions of the National Health Service, every person must register with the general practitioner of his choice; the general practitioner then receives an annual fee for each patient on his list."  
E.S.O. Smith, op.cit., p.326

[xv] Denmark, Sweden and, to a lesser extent, West Germany also operate control programs similar to the one in the U.K.

CHAPTER FOUR

Health Promotion and the Gonococcus

...Knowledge advances by steps and not by leaps.  
Macauley, Essays and Biographies, 1830

## Part One: Introduction

Various surveys have been conducted measuring the extent of knowledge on S.T.D.'s, particularly among the high-risk groups.<sup>171,172,173</sup> While differing as to the best medium for supplying information (i.e., schools, pamphlets, radio, newspapers, television, billboards, etc.) they all agree that most people are aware of the potential severity of S.T.D. infections but lack knowledge on the specifics of symptomology, asymptomatic infections, prevention and treatment locations.

Promotional programs elsewhere have been undertaken and evaluated and, while again differing as to the most effective medium, have demonstrated that promotion/educational activities increased demand for services.<sup>174,175,176,177</sup> The Polish campaign, a multi-faceted eight year undertaking, was also partially credited with an 85% reduction in the syphilis rate and a 30% reduction in the gonorrhea rate.

The health promotion campaign undertaken in British Columbia between September, 1977 and January, 1980 had two primary objectives: increasing clinic attendance and decreasing the incidence of gonorrhea. It was hypothesized that the former would logically result in the latter. The results certainly verify the first objective, but are, at best, equivocal about the second one.

Part Two: Overview and Strategy [i]

In September of 1977, the Division of V.D. Control began its first radio advertising campaign in an attempt to reduce the prevalence of the most common sexually transmitted infections, with specific emphasis placed on gonorrhoea. Radio ads were placed on a variety of selected stations for the month, and initial response was so favourable that ads were again broadcast in November, 1977, and February/March, 1978. Preliminary evaluations of the effectiveness of the commercials led to a decision to undertake a massive advertising campaign for at least the next three years.

During 1978, ads were broadcast throughout the province during the months of June through September. Large 1 by 3 meter posters were placed on the sides of buses servicing the Greater Vancouver district, an area which contains almost half of the total population of British Columbia. In 1979 it was further decided that advertising should be maintained on a continual basis for the entire year, beginning in April (the first month of the 1979/1980 fiscal year) and continuing until the end of March, 1980. The campaign, for budgetary reasons and due to its "success", was scrapped in January, 1980, and has not yet been resumed. Radio ads were broadcast on eight strategically located stations in the major population centres for the nine months of the campaign; a total of 37 radio stations were used during the summertime "blitz" of June through August, and large bus posters were again purchased for a period of

four months (July through October) while smaller inside bus cards advertising the hours and location of the main Vancouver V.D. Clinic ran for six months (June through December).

Throughout the campaign, smaller ads, press releases and interviews with health officials were also placed in newspapers and magazines, and government health consultants gave over 60 radio and 25 television "promotional" interviews.

The cost of the campaign from September, 1977 to January, 1980, was \$192,112.35. If the costs of staff salaries, pamphlet and poster production, travel expenses and the like are also included, the total cost would have been closer to \$300,000. In addition, approximately \$100,000 of free advertising was donated by the commercial radio stations involved in the campaign in the form of public service announcements.

#### A. STRATEGY

From the beginning we have been clear that the epidemic of gonorrhoea was not the result of the so-called increase in promiscuity or "casual" sex, and the the major behavioural problem of the "host" is multiple, anonymous sexual contact without the prophylactic use of condoms and/or foam. In fact, the stigma attached to V.D. (the "just punishment" for fooling around outside of the moral tradition of strictly monogamous marriages) has very much impeded control and health promotion programs in the past. 178

Our approach was grounded on an assumption that it is perfectly normal to contract a V.D. and, given the epidemic levels of the disease, it is more vital to prevent physical



damage and/or needless transmission of the infection than to prevent infection in the first place. In order to so, we constructed advertising composed of the following succinct points:

- 1] EVERY SEXUALLY ACTIVE PERSON IS POTENTIALLY AT RISK OF CONTRACTING V.D.

We chose not to "focus" on teenage or young adult populations for several reasons, many of which have already been discussed on pages 104-108.

- 2] V.D. IS EPIDEMIC AND YOU SHOULD KNOW THE SYMPTOMS

Besides providing updated pamphlets and poster information, and supporting and expanding school awareness programs<sup>[ii]</sup>, we also set up a V.D. Information Line. This line—which can be dialed toll-free from anywhere in the province, and which operates 24 hours a day—provides a three-minute recorded message on the symptoms and prevention of gonorrhoea and other common sexually transmitted diseases. Proper use of the condom is also emphasized, as is the need for routine V.D. checkups, notification of partners, and the use of the local health unit as a source for additional information. We use two voices on the message—one male, the other female—both to break up the potential monotone and to indicate the concerns that are specific to each sex.

- 3] V.D., ESPECIALLY GONORRHEA, IS OFTEN WITHOUT EARLY SYMPTOMS, SO HAVING AN ANNUAL OR MORE FREQUENT V.D. CHECKUP IS A GOOD IDEA TO CONSIDER

Financially, the province is not in a position to recommend

routine screening for V.D. on all persons. It is, however, both practical and ethical to discuss it in the context of the non-monogamous sexually active person. One ad, addressed specifically to the problems that women face, includes an invitation to women to ask for a gonorrhoea culture when they have their Pap tests or routine internal exams. This is further supported by the following advice we give to physicians in our new "Sexually Transmitted Diseases: A Manual for Physicians", which reads, "When a woman is sexually active with more than one partner, the physician may choose to offer a gonococcal culture during routine internal examinations or when Pap tests are taken."<sup>179</sup>

4] AS RESPONSIBLE, SEXUALLY ACTIVE ADULTS WE MUST DO ALL WE CAN TO ENSURE THAT IF WE CONTRACT A CASE OF V.D., OUR PARTNER OR PARTNERS ARE NOTIFIED SO THEY, TOO, CAN SEEK DIAGNOSIS AND TREATMENT

The rationale for urging contact notification has already been discussed (pages 91-95, 118-119). We referred to this particular host behaviour as a practical responsibility rather than a "moral" responsibility for the simple reason that, if all infected or suspect contacts were treated, gonorrhoea would become less prevalent, with a greatly reduced risk of any individual becoming re-infected in the future. Or, in the words of a pop classic of the lay-back 60's: Don't give a dose to the one you love most, give her some marmalade, give her some toast, give her a partridge in a pear tree, but the dose that

you give her might come back to me.

The degree to which each of these basic "units" was stressed varied from commercial to commercial, and sample copy of several ads is produced in part four of this chapter. Shorter commercials (30 second length) tended to be used to promote the information line and the need for regular checkups, while 60 second commercials lent themselves to discussions of the more difficult concepts of sexual responsibility. We did attempt in one very short-lived campaign to actually discuss symptoms on the air, but the possibility for controversy made senior government officials back off. In retrospect, it was agreed that general concepts were the best things to promote in advertising providing that the "hard stuff" was taken care of in another fashion, i.e., the V.D. Information Line.

Throughout the design and execution of the campaign, we always kept in mind our two premises for the V.D. epidemic: the reservoir of asymptomatic cases and the absence of good contact notification and treatment. We hypothesized that the way around these obstacles was to:

- 1] Alert people to the epidemic status, signs and symptoms of disease, and services available;
- 2] Increase the number of people attending clinics, especially with their partners;
- 3] Increase the number of potentially infected persons coming into clinics for checkups; and
- 4] Create a health-oriented atmosphere with respect to V.D.

so that the stigma of infection would no longer prevent people from ensuring that their partners were notified. Special emphasis was placed on utilizing government operated V.D. clinics rather than private physicians, in a half-hearted attempt to overcome the difficulty of physician non-reporting. (see pages 115-128) In the long run, we expect that making V.D. a common-place subject will loosen up any of the fears and misgivings physicians and society as a whole have with respect to taking responsibility for an infected person's partners. 180

### Part Three: Evaluation

The campaign evaluation has been broken down into several categories: demand for information, clinic attendance, gonorrhoea rate and a radio station survey.

#### A. INFORMATION

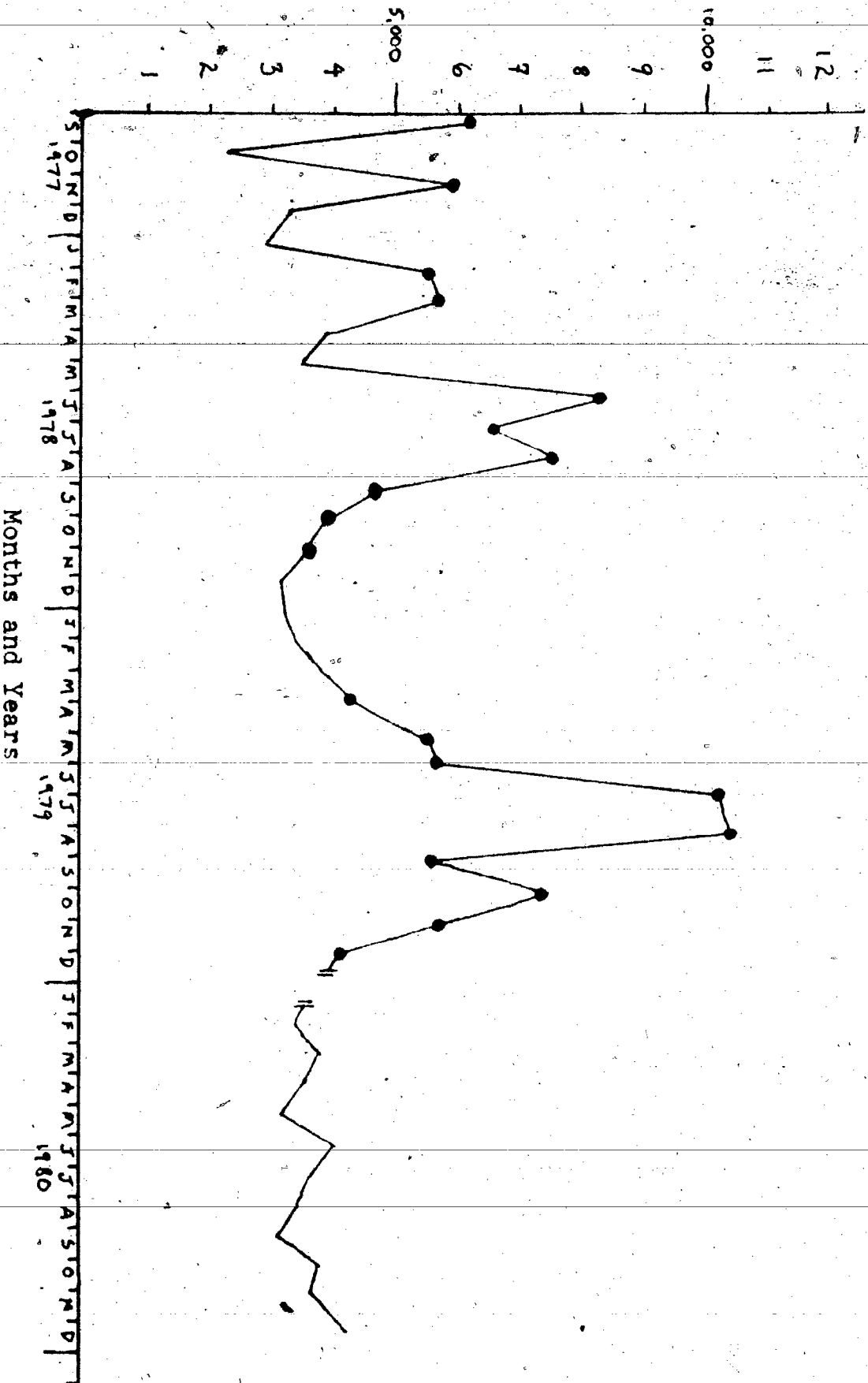
There are two measures of information demand: requests for pamphlets and Information Line use. From September 1977 to April 1980, over 100,000 pamphlets were distributed. A third edition of the most popular pamphlet (a 36 page pamphlet titled "STD: A manual on sexually transmissible diseases") in a press run of 50,000 copies will go into a fourth edition before the end of April, 1981. In addition, approximately 15,000 posters have also been distributed since September, 1977. Admittedly, the demand for this information has been initiated by health professionals for use in classrooms, clinics, pamphlet racks and so on.

A more accurate measure of the campaign's impact on information demand has been the number of calls received by the V.D. Information Line. During the campaign period (Sept. 1, 1977 to January 31st, 1980) the number of calls totalled 147,239. During the summer of 1979 the demand was so great that numerous complaints were received indicating that the Line was constantly busy and people were unable to get through for several days at a time. A second automatic answering device was installed to handle the load. Calls continued to come in during 1980, despite

the cessation of advertising. By this time, tens of thousands of pamphlets and posters had been distributed to schools, health units, clinics and other government offices advertising the Information Line number. Total calls received from February 1st 1980 to December 31st 1980 numbered 189,293, for a daily average from Sept.1977 to Dec.1980 of 154 calls.

Demand for information was directly related to the extent of advertising, as the following Graph and Table indicate. (Note: Months of advertising are indicated on the Graph with a black dot. Equal amounts of money were not spent in the various months of ads, as the Table indicates. Those months with greatest Information Line use were also those months with greatest advertising expenditures. Note also that during October and November of 1978, the only advertising was on busboards which reached a substantially smaller audience, as reflected in the declining Information Line use in those months. In July 1979 a second device was added, accounting for the enormous increase in calls received. Finally, in January 1980 the machines were out of order, accounting for the very low number of calls received that month.)

Number of calls received



GRAPH 1: V.D. Information Line--Calls received by month and year

YEAR	MONTH	CALLS REC'D	ADVERTISING \$'s	
1977	SEPTEMBER	6,162	13,819.00	
	OCTOBER	2,340		
	NOVEMBER	5,992	10,844.00	
	DECEMBER	3,336		
1978	JANUARY	2,989		
	FEBRUARY	5,638		
	MARCH	5,742	7,732.55	
	APRIL	3,927		
	MAY	3,516		
	JUNE	8,207	7,031.00	
	JULY	6,470	14,032.00	
	AUGUST	7,521	20,574.00	
	SEPTEMBER	4,897	10,200.00	
	OCTOBER	3,915	4,122.66	
	NOVEMBER	3,753	4,122.66	
	DECEMBER	3,162		
	JANUARY	3,250		
	FEBRUARY	3,365		
1979	MARCH	3,898		
	APRIL	4,387	3662.65 *	
	MAY	5,496	2895.00 *	
	JUNE	5,712	6416.82 *	
	JULY	10,221	17,265.18 *	
	AUGUST	10,293	17,168.00 *	
	SEPTEMBER	5,631	13,852.75 *	
	OCTOBER	7,255	3,145.00 *	
	NOVEMBER	5,980	1,065.00 *	
	DECEMBER	4,194	4,002.82 *	
	1980	JANUARY	(416)	5,076.00 *
		FEBRUARY	3,615	
		MARCH	3,873	
APRIL		3,729		
MAY		3,446		
JUNE		4,043		
JULY		3,876		
AUGUST		3,654		
SEPTEMBER		3,329		
OCTOBER		3,953		
NOVEMBER		3,860		
DECEMBER		4,260		
			189,293	167,029.09*

TABLE 5: V.D. Information Line calls by month and year also indicating dollars of advertising spent

\* For internal administrative reasons, \$25,083.46 of 1979's campaign costs were defrayed to the 1980 fiscal budget. Thus, 1979 advertising figures in this table are slightly inaccurate, and the total budget was actually \$192,112.55.



Considering both pamphlets, posters and Information Line calls as the total demand for information, some 350,000 units of S.T.D. information have been distributed in the past  $3\frac{1}{2}$  years. If the costs of total advertising (excluding "infrastructure" costs such as salaries, printing, phone bills, etc.) are applied to information demand, each call to the Information Line cost \$1.15; when pamphlets are included, the per unit cost of promoting S.T.D. information becomes only 55¢. Even if infrastructural costs are included (see page 137), the per unit cost would still be only approximately \$1.00.

Origins of both Information Line use and pamphlet requests reflect the population distribution of the province, indicating that the campaign has been effective in reaching sparsely populated regions as well as metropolitan areas. Approximately 26% of all Information Line calls, for example, originate from areas outside the Greater Vancouver free-dialling area.

A query as to the length of the recorded message (3 minutes) was raised by some colleagues, who specifically questioned whether or not people would actually listen to the entire message. An analysis of calls coming into the Information Line using toll-charge invoices was conducted in May, 1980. Using a random sample technique, 3,557 calls were examined to see how long the caller stayed on the line. 16% stayed on the line for one minute or less, 11% for two minutes or less, 41% for the full three minutes, and 32% listened to the message more than once before hanging up.

## B. CLINIC ATTENDANCE

Although word of mouth and incomplete data indicated that all provincial V.D. clinics recorded attendance increases during the months of advertising, the only complete data comes from the main V.D. clinic in Vancouver. This clinic, however, handles almost 30% of all reported cases of gonorrhoea in the entire province<sup>181</sup> and thus constitutes a substantial sample group.

Clinic attendance patterns in the three years prior to the campaign were strikingly similar, as the Table below indicates:

Year	Male Attend.	Female Attend.	Total
1975	13,846	4,849	18,695
1976	13,915	4,574	18,489
1977	13,613	4,188	17,801

Table 6: Vancouver Clinic Attendance, 1975-1977

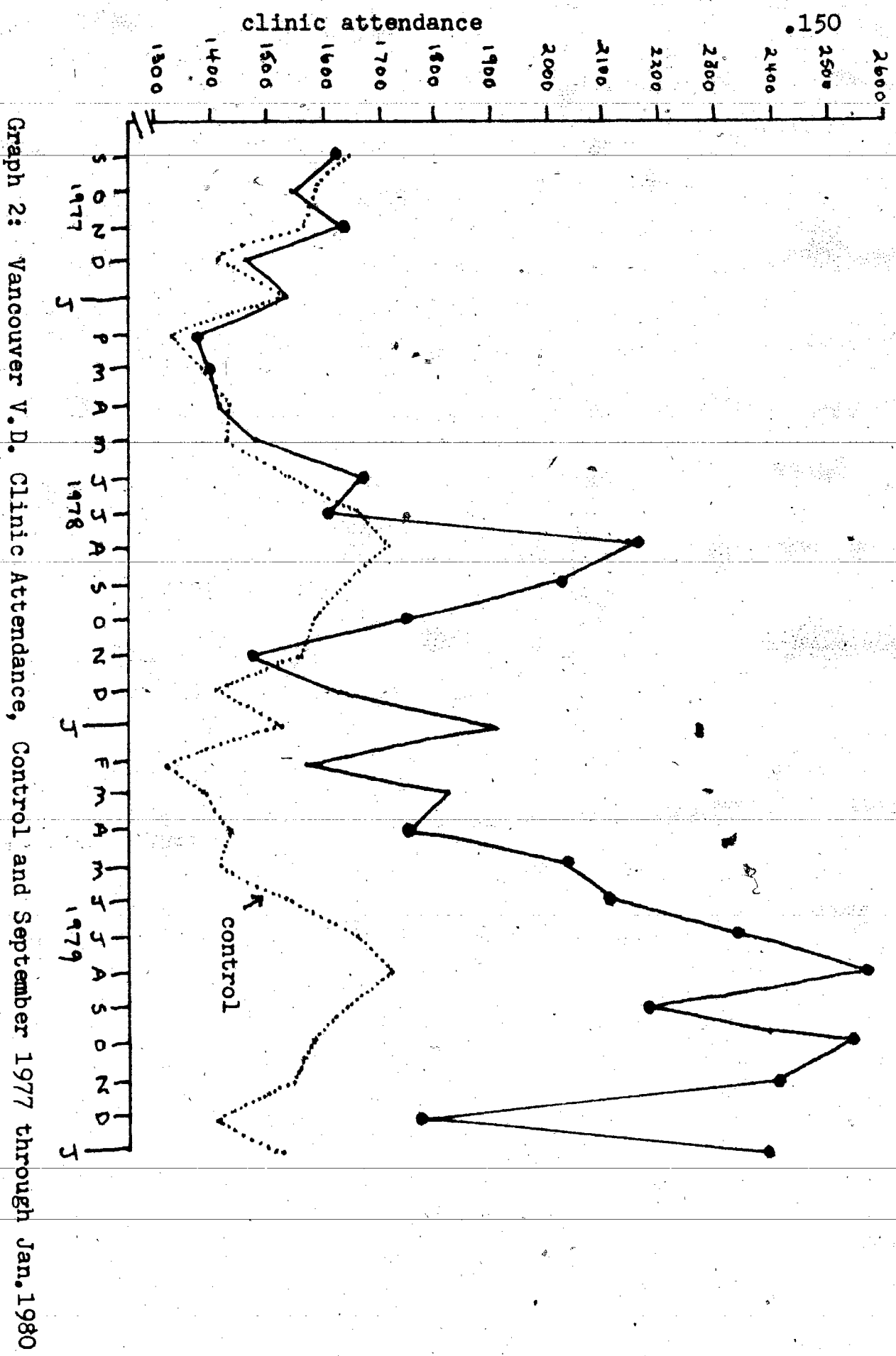
The corresponding figures for the two years of the campaign (1978 and 1979), as well as for the year following the campaign are given below:

Year	Male Attend.	Female Attend.	Total
1978	14,719	4,841	19,560
1979	18,221	6,630	24,851
1980	17,776	6,318	24,094

Table 7: Vancouver Clinic Attendance, 1978-1980

It is evident from these figures that the campaign had a demonstrable impact on increasing clinic attendance that has persisted well beyond the termination of the radio ads themselves. A comparison of the year preceding the campaign (1977) and the year of maximum advertising (1979) yields a 34% rise in male attendance, a 58% rise in female attendance, and a 40% rise in net (male and female) attendance. Presuming that the differences in attendance rates between 1977 and 1978-1980 were largely the result of the promotion campaign, a total of 15,102 new patients were seen by the clinic who might not otherwise have attended, for an advertising cost of \$12.72 per patient.

Below is a Graph and Table showing total clinic attendance by month; months of advertising are indicated by a black circle. The Table further separates clinic attendance by sex. A "clinic attendance control" has been constructed by averaging attendance during the three years prior to the campaign.



Graph 2: Vancouver V.D. Clinic Attendance, Control and September 1977 through Jan. 1980

Table 8: Vancouver V.D. Clinic Attendance, Total and by Sex,  
Control and Sept. 1977 through Jan. 1980

MONTH advertis- ing indicated by an *	MALE ATTENDANCE			FEMALE ATTENDANCE			TOTAL ATTENDANCE		
	Sept. 1977 to Jan. 1980	CONTROL	% diff.†	Sept. 1977 to Jan. 1980	CONTROL	% diff.†	Sept. 1977 to Jan. 1980	CONTROL	% diff.†
Sept.*	1213	1230	(1.4)	419	419	-	1632	1649	(1.0)
Oct.	1180	1215	(2.9)	376	382	(5.2)	1556	1597	(2.6)
Nov.*	1275	1188	7.3	368	386	(4.7)	1643	1574	4.9
Dec.	1125	1074	4.7	322	331	(2.7)	1447	1405	2.9
Jan.	1178	1187	(0.8)	357	352	1.4	1535	1539	(0.3)
Feb.*	1102	1012	8.9	284	310	(8.4)	1386	1322	4.8
March*	1023	1055	(3.0)	371	342	8.5	1394	1397	(0.3)
Apr.	1106	1082	2.2	315	359	(12.3)	1421	1441	(1.4)
May	1113	1087	2.4	357	344	3.8	1470	1431	2.7
June*	1221	1144	6.7	454	403	12.7	1675	1547	8.3
July*	1221	1220	-	401	445	(9.9)	1622	1665	(2.6)
Aug.*	1631	1260	29.5	550	447	23.0	2181	1707	27.8
Sept.*	1526	1230	24.1	485	419	15.8	2011	1649	22.0
Oct.*	1330	1215	9.5	421	382	10.2	1751	1597	9.6
Nov.*	1049	1188	(11.7)	439	386	13.7	1488	1574	(5.5)
Dec.	1220	1074	13.6	404	331	22.1	1624	1405	15.6
Jan.	1444	1187	21.7	465	352	32.1	1909	1539	24.0
Feb.	1172	1012	15.8	412	310	32.9	1584	1322	19.8
March	1318	1055	25.0	511	342	49.1	1829	1397	31.0
Apr.*	1318	1082	21.8	441	359	22.8	1759	1441	22.1
May*	1479	1087	36	552	344	60.5	2031	1431	42.0
June*	1569	1144	37.2	532	403	32.0	2101	1547	35.8
July*	1712	1220	40.3	630	445	41.6	2342	1665	40.7
Aug.*	1867	1260	48.2	709	447	58.6	2576	1707	50.9
Sept.*	1598	1230	29.9	594	419	41.8	2192	1649	32.9
Oct.*	1878	1215	54.6	664	382	73.8	2542	1597	59.2
Nov.*	1793	1188	50.1	610	386	58.0	2403	1574	52.7
Dec.*	1277	1074	18.9	510	331	54.1	1787	1405	27.2
Jan.*	1760	1187	48.3	638	352	81.3	2398	1539	55.8

† = decreases indicated by parentheses.

The Table reveals an interesting anomaly in November, 1978, in which male attendance dropped while female attendance rose. During this month advertising consisted only of the large exterior busboards. The sexual difference in attendance might reflect the fact that women are much more likely to be bus passengers than men, and hence would notice the outside busboards to a greater extent than men. Men are more likely to drive cars and to listen to radios.

Finally, as an addendum to clinic attendance data, a voluntary survey was administered to patients at the V.D. clinic in July, August and September, 1979. Forty per cent of all clinic patients responded (N=1812), and 95% of these indicated that they had heard the campaign. Of those, 51% said that it had an impact on their attending the clinic. Curiously, 27% of the persons who said they hadn't heard any advertising still indicated that the ads had had an impact on their attending the clinic. Such are the foibles of pen and paper questionnaires!

#### C. GONORRHEA RATE

The gonorrhoea rate, by itself, is not a terribly useful figure in measuring actual disease incidence. As the rate measures only the number of reported cases seen in a year, there are many factors which could allow for a lower rate while, at the same time, actually increasing the prevalence of gonorrhoea. Such factors include: reduced clinic attendance, reduced contact notification, and reduced cooperation from physicians. Only when a whole cluster of figures are interpreted together can

any estimate of the prevalence of gonorrhoea be made.

Below is a Table indicating the shifts in gonorrhoea rates for the United States, Canada, and British Columbia. In 1978, B.C. recorded a substantial decline in its rate.

Table 9: Shifts in Gonorrhoea Rate in the U.S., Canada and B.C. 1975-1978

Year	U.S.A. <sup>182</sup>	Canada <sup>183</sup>	B.C. <sup>184</sup>
1975-1976	.52% decline	3.1% incline	2.1% decline
1976-1977	.98% decline	1.5% decline	1.4% decline
1977-1978	1.03% incline	4.5% decline*	8.5% decline

\* excluding British Columbia data, this decline becomes 3.4%

Two other provinces (Saskatchewan and Manitoba) demonstrated rate declines between 1977 and 1978 equal to or greater than the decline in B.C., although only in B.C. did the decline occur simultaneously with an increase in clinic attendance.

My purpose in examining the rate was to maintain the validity of my second hypothesis: that increasing clinic attendance would eventually lower the gonorrhoea rate by "draining" the asymptomatic reservoir. Because rate is not a good indicator by itself, I speculated that tying it to clinic activity (specifically attendance figures and the ratio of positive gonorrhoea cases to attendance) might be more useful.

I set up five hypothetical situations and commented on what they might imply about gonorrhoea prevalence:

- 1] When there is no increase in clinic attendance, and no increase in the ratio of + G's (positive cases of gonorrhoea) the incidence of disease has remained the same.
- 2] Where there is a decrease in clinic attendance, and an identical rate of decline in the ratio of + G's, the incidence of disease has remained the same.
- 3] When there is an increase in clinic attendance, and a parallel or greater increase in the ratio of + G's, the "reservoir" of asymptomatic infections is being reached, and will shortly begin to "drain".
- 4] Where there is an increase in clinic attendance, and a decrease in the ratio of + G's, there has been a decrease in the incidence of disease, i.e., the reservoir is being drained.
- 5] Where there is a decrease in clinic and an increase in the ratio of + G's, the incidence of disease has actually increased, i.e., the reservoir of asymptomatic infections is higher than previously.

I went to great pains to substantiate this argument, including an effort to create a "theoretical" model of the relative pervasiveness of gonorrhoea that held clinic attendance figures constant. I did this by calculating the ratio of gonorrhoea cases to clinic attendance, then divided this ratio by clinic attendance to reduce the variability of attendance. [iii] The



resultant figure intimates the "true" pervasiveness of the disease. I admit that this calculation is of dubious value at best, but for interest's sake I have tabulated the results for the years of the campaign (1978 and 1979) and for the "control" (average of 1975 - 1977). (See Table 10, page 155)

While these figures support my thesis in a limited way, i.e., that increasing clinic attendance leads to decreasing prevalence of gonorrhoea (manifest by a declining value in the equation: number of + G's/number of clinic attendance divided by clinic attendance), I acknowledge that they are much too tenuous and "manipulated" to validate it. Furthermore, in the absence of performing the same calculations on "control provinces" where no campaign has occurred and where demographic matches could be made, the data is more an example of the lengths some people (i.e., the author) will go to in order to support a hunch.

Finally, the gonorrhoea rate did not respond in 1979 according to my prediction. Rather than continuing to decline, it rose 3.5%.<sup>185</sup> There is also preliminary data indicating another rate increase in 1980. Clinic attendance continues to remain high, however, which means that the hypothesis contrary to mine—that the incidence of gonorrhoea in B.C. is increasing—is not necessarily valid either. While I cannot support my second hypothesis I am still convinced of its logic. Furthermore, the vast differences between North American and United Kingdom gonorrhoea rates is indicative of, if nothing more, our abilities

Table 10: Relative Pervasiveness of Gonorrhoea (+G's/attend. divided by attendance), Male and Female patients, Vancouver Clinic—Sept. 1977—Jan. 1980 and control

MONTH	MALE PATIENTS				FEMALE PATIENTS			
	Gonorrhoea cases per attendance		% per attendance		Gonorrhoea cases per attendance		% per attendance	
	%	CONTROL	$\times 10^3$	CONTROL	%	CONTROL	$\times 10^3$	CONTROL
Sept	15.1	17.4	12.4	14.1	15.8	17	37.6	41
Oct	13	14.6	11	12	15.7	15	41.7	39
Nov	12.2	13.9	9.6	11.7	13.3	13.5	36.2	35
Dec	14.8	15.8	13.2	14.7	13.7	15.8	42.4	48
Jan	13	13.2	11	11.1	11	16.6	30.6	47
Feb	15.8	16.2	14.3	16	17.6	16	62	52
Mar	14.6	13.7	14.2	13	12.1	13.5	32.7	39
Apr	13.6	14.1	12.3	13	14.3	15.6	45.4	43
May	12.8	14.7	11.5	13.5	10.1	14.7	28.2	43
June	11	15.3	9	13.4	8.6	19	19	47
July	11.3	15.8	9.2	12.9	12.7	16.9	31.7	38
Aug	10.5	16.4	6.4	13	11.1	21	20.2	50
Sept	11.6	17.4	7.6	14.1	10.5	17	21.7	41
Oct	15.6	14.6	11.7	12	7.9	15	18.7	39
Nov	14.1	13.9	13.4	11.7	9.8	13.5	22.3	35
Dec	10.7	15.8	8.7	14.7	10.4	15.8	25.8	48
Jan	10.7	13.2	7.4	11.1	7.7	16.6	16.6	47
Feb	12.1	16.2	10.3	16	8.5	16	20.6	52
Mar	11.8	13.7	9	13	9.6	13.5	18.8	39
Apr	12.7	14.1	9.6	13	9.3	15.6	21.1	43
May	12.2	14.7	8.3	13.5	8.5	14.7	15.4	43
June	12.2	15.3	7.8	13.4	9.8	19	18.4	47
July	10.1	15.8	5.9	12.9	8.4	16.9	13.4	38
Aug	10.2	16.4	5.5	13	5.8	21	8.2	50
Sept	13.3	17.4	8.3	14.1	9.6	17	16.2	41
Oct	12.4	14.6	6.6	12	7.4	15	11.1	39
Nov	10.1	13.9	5.6	11.7	6.2	13.5	10.2	35
Dec	14.1	15.8	11	14.7	7.5	15.8	14.6	48
Jan	13.1	13.2	7.5	11.1	8	16.6	12.5	47

to reduce our rate via increased clinic attendance and better contact notification. Ultimately, it is possible that the rise in gonorrhoea rates now occurring in British Columbia is the first stage in "draining" the reservoir (my hypothetical situation number 3 on page 153) and that, had clinic attendance continued to rise with a sustained advertising campaign, we may have seen a drop in the gonorrhoea rate after a few more years.

D. STATION SURVEY

A short survey of 13 radio stations involved in the first two months of our advertising campaign (September and November, 1977) was conducted in November, 1977, partially due to controversy over explicit references to symptoms in the first part of the November campaign. The following questions were sent to the program directors, with the results tabulated:

	YES	NO
1. a] Did your station run the ads?	11	2*
b] Does the mass media have a public service responsibility in issues such as V.D.?	9	5
c] Did you personally like the ads?	10	3

\* The objections raised by the two stations which refused to air the paid-for spots centered on their wanting a sterner approach to the subject, tinged with a desire to have their own creative department script the ads. We had used the creative department of a competitive station in scripting the first two sets of radio commercials and found that it led to station

rivalry. In later campaigns we used a "neutral" ad agency, with most of the commercial scripting done first by myself, although not before a run-in with a flashy and expensive creative house (described in the next part).

2.	a]	Did you expect controversy in running the ads?	6	5
	b]	Were there any complaints made to your station?	1	10
	c]	Were there any compliments made to your station?	7	4
3.	a]	Would you run ads making reference to symptoms?	6	4
	b]	Do you think such ads are necessary?	4	6
	c]	Do you think there would be negative public reaction to such ads?	4	6

The second question above illustrates that most stations expected controversy, while only one station reported a single negative comment and several others reported several positive comments. Question three makes it obvious that my intention with the survey was to justify more explicit ads, and I wanted "ammunition" to fire before reluctant senior Ministry officials. The reaction was mixed, however, and the decision was made to avoid referring to symptoms over the radio.

In general, the response was favourable to the concept of V.D. advertising, and in later campaigns utilizing some 40 stations we never received a negative comment. In fact, many stations involved in the campaign were usually eager to broadcast talkshows and interviews on the subject, and to generate

as much publicity as possible. Their interest was not simply pecuniary; our agency estimated that we received at least one public service broadcast (psa) for every two slots we purchased. Station records further indicate that these free spots were aired in prime time, and not buried at 3 a.m. Many stations also continued broadcasting the ads as public service announcements long after the paid campaign ended.

Finally, broadcast time was carefully selected, with most of the time purchased between 7 p.m. and 1 a.m. when the under 35 age-group was most likely to be listening. Ads were placed on "top 40", MOR (middle of the road, easy listening), and FM stations in an effort to reach both younger and older at-risk audiences, as well as the parents of teenagers and young adults.

#### E. SUMMARY

The above data clearly documents that the health promotion campaign had a substantial impact on information demand and V.D. clinic attendance. Whether or not this strategy will reduce the incidence of gonorrhoea has yet to be proven. Ultimately, because gonorrhoea and many other sexually transmitted diseases are pandemic, it will take an international effort of the same scale as the WHO smallpox eradication program to finally "pass the pox" into oblivion.

Part Four: Materials Used in the Campaign

A. RADIO ADS

The first set of radio ads (three 60 second commercials and three 30 second commercials) were produced by an MOR radio station with an ear to breaking into the "top 40". They were not used in the form produced for several reasons: first, they were entirely focussed on the teenage population, the problematics of which I have already discussed; second, their "top 40" over-orchestrated approach attempted to make the problem "hip" while the actual copy betrayed a residual attitude of "heaviness"; third, senior Ministry officials decided against having musical accompaniment to V.D. ads in general, although this was not fully acted upon until the April 1979 flight of ads; fourth, the standard treatment for gonorrhoea is a stat oral dose of pills, and not a "shot" as referred to in the ads—a reference which many V.D. workers thought might scare people off. The ad copy, however, is produced below to serve as an example of how not to publicize the problem!

ONE (60 second)

[loud, brassy disco track in background, top 40 d.j. voice over]  
There's a new dance going around that nobody wants to learn the steps to. It's the V.D. boogie. You may know it as gonorrhoea. It attacks the sexually active, infects 2% of our

population every year and some don't even know it. Now getting V.D. is no sin, but not doing anything about it is just stupid. The only way to stop it is to recognize its symptoms and take the cure. [refrain] V.D.'s in town don't pass it around, take the cure put V.D. down. Here's what to look for. Two to five days after contact men may experience a discharge and a burning sensation when urinating. Most women unfortunately show no symptoms at all. You're safest to check with your doctor or public health clinic. Fear not. Treatment is free and confidential, so don't try and treat yourself. With professional treatment the cure is just a shot away. [refrain] V.D.'s in town don't pass it around, take the cure put V.D. down. Learn about V.D. today, so it won't boogie with you tomorrow.

TWO (60 second)

[soft flute in background, serious voice over]

Each year thousands and thousands of the people we love receive an unwanted present. In fact, this unwelcome philanthropy has become epidemic. No one's immune to this particular surprise package. Any sexually active young adult can wake up to find they've been gifted, so to speak. The catch is, most people never know they have received, so like a sinister chain letter the giving spreads. And there's no way you can return this gift. You can only destroy it or pass it on. What is this unwanted present? Venereal disease, gonorrhoea and syphilis. It's not shameful. V.D. is simply a disease and nobody can

make you keep it. Learn to recognize V.D. symptoms. If you have your suspicions, visit your public health clinic for free and confidential treatment. Nobody wants to be a giver or a receiver, so if you've received an unwanted present, take it to the complaint department. Don't pass it on.

THREE (60 second)

[same soundtrack and announcer as ONE]

Of all diseases, only V.D.—gonorrhoea and syphilis—can embarrass you to death. These plucky little germs have their act so together that not only do most victims not recognize the symptoms but they're so ashamed about how they got the disease that they never take the cure. [refrain] V.D.'s in town don't pass it around, take the cure put V.D. down. V.D. can be justifiably proud of itself now that it's swelled into a full-fledged epidemic. It's biggest strength is that of all disease only V.D. is considered a sin. So we shut our eyes and pretend it can't happen here. Wishing on a star can't help. V.D. can happen to you too, even if you're no longer young at heart. Learn about V.D. and remember, the cure is just a shot away. If you have your suspicions, don't try to treat yourself. See your doctor or public health office today. Medicine is free and treatment is absolutely confidential. Learn about V.D. After all, nobody's immune. [refrain] V.D.'s in town don't pass it around, take the cure put V.D. down. Don't let V.D. embarrass you to death.



FOUR (30 second)

[same soundtrack and announcer as ONE]

V.D. is nothing to clap about. [refrain] V.D.'s in town don't pass it around, take the cure put V.D. down. Each year thousands of British Columbians get a little unwanted help from their friends. Learn V.D. symptoms then take the cure at your local public health clinic. It's free and completely confidential.

FIVE (30 second)

["Hotline, hotline..." pop song in background]

Phone the V.D. hotline when you want information about symptoms and treatment. Toll-free from anywhere in the province. Dial operator and ask for Zenith 4014. A recorded voice provides all the information you require. That's the toll-free V.D. hotline, Zenith 4014. Then see your public health clinic for treatment.

SIX (30 second)

[disco music in background]

When you need information, call the V.D. hotline. Zenith 4014. Zenith 4014. The V.D. hotline. Toll-free from anywhere in the province. For information on V.D. symptoms and treatment dial operator and ask for Zenith 4014. If you want treatment, it's free and confidential at your local public health clinic. The V.D. hotline. Zenith 4014.

We ended up using scripts FIVE and SIX without making changes, and rewrote script TWO to remove references to "philanthropy", "sinister", "shame" and so forth, and to generalize it to all sexually transmissible infections by deleting references to gonorrhoea and syphilis.

By November we were a little more on track with the concept of advertising we wished to create. Two sixty second ads were scripted (one directed towards women, one towards men). The latter is produced below:

SEVEN (60 second)

[country and western soundtrack background, copy half "sung" and half read]

VOCAL: Take care of the ones you love, and take care of your health. ANNOUNCER: Especially your sexual health. With over 50,000 cases of gonorrhoea suspected in B.C., everyone should become V.D. conscious. VOCAL: Don't point your finger, don't shake your head, it can happen to you. ANN: And just might. VOCAL: Sad but it's true so know what to look for and know what to do. ANN: And do it, today. If you notice any change around your sex organs, any sores or discharge, any swelling or tenderness, or any pain when urinating, especially if you've had sex with a new partner in the last month, you should see your doctor or public health clinic for free and confidential V.D. tests and treatment. For more information on V.D. symptoms call the toll-free V.D. information line, Zenith 4014. It's time each of us learned to be concerned and to take care of

our sexual health.

This was the ad that sparked the controversy around mentioning symptoms on the air, and as a result we were forced to switch to a more sedate, non-musical format. Before adopting such a policy, however, pressure from certain Vancouver radio stations directed us to one of the two major "creative" houses in the Lower Mainland. The result was four ads, two 60 second and two 30 second commercials, which would have cost us over ten thousand dollars just to produce. Furthermore, the ads tried to capitalize on "hipness" even more than the first set of "top 40" ads which were not used, and were designed to be sung in a "Bee Gee's" style vocal, with 4 supporting voices and a 16 piece backup band. The two 60 second commercials (never used) are produced below:

EIGHT

Woman: You're a man and maybe

We could be friends and lovers.

But if you don't look after yourself

You ain't gettin' under my covers

We're grown up people

And honey, it's my rule

You gotta take care of you...

'Cause baby, I don't want it

I don't want it.

Baby, I don't want it

I don't want it.



Bridge: Nobody wants it. But sexually transmitted disease still spreads. Your Provincial Ministry of Health urges you to get regular S.T.D. checkups. They're free from your physician or through your local health unit. Call the S.T.D. hotline for information on symptoms and prevention.

Woman: Baby, I don't want it

I don't want it.

Baby, I don't want it

I don't want it.

NINE

Man: Lady you earned your freedom

Choosing is now your right

So if you're gonna make more than small talk

Make sure it's gonna be alright.

Maybe we won't happen

But just in case we do

I'm takin' care of me, babe

You can take care of you

'Cause baby, I don't want it

I don't want it.

Baby, I don't want it

I don't want it.

Bridge: as above in EIGHT

Man: Baby, I don't want it

I don't want it.

Baby, I don't want it

I don't want it.

In the Spring of 1978 we first began to announce our basic three-part message: know V.D. symptoms, have regular checkups, and always ensure contact notification. The following ads set the tone for the rest of the campaign.

TEN (60 second)

Venereal disease is epidemic in B.C., and every sexually active person is at risk of infection. If V.D.'s not treated promptly it can be crippling. There are three simple things you can do to protect yourself. First, learn about V.D. symptoms and prevention. Call the toll-free V.D. Information line today. Just dial operator and ask for Zenith 4014. If you notice any signs, see your local health unit or doctor immediately.

Second, have annual V.D. checkups, because sometimes there just aren't any early signs of infection. V.D. checkups are free and confidential through your local health unit. Third, if you have V.D., always make sure that your partners are notified, as they may also be infected. So do these three simple things--learn V.D. signs and prevention, have regular V.D. checkups, and ensure that your partners are treated--and help take the risks out of being close.

ELEVEN (60 seconds)

Each year over 50,000 British Columbians are infected with

venereal disease. Every sexually active person is a potential target for a V.D. infection. One thing we can all do to reduce our risks, if we do get V.D., is to get prompt treatment ourselves, and to always ensure that our partners are told that they might be infected. It is especially important that men do this, since they are more likely to have V.D. symptoms than women. Usually women don't find out they have a venereal disease until they are told by their male partners or are notified by a V.D. clinic. All testing, treatment and notifications are free and absolutely confidential through your local health unit. Take V.D. seriously, for yourself and others. Have a V.D. checkup today. For more information, call the 24 hour V.D. information line by dialing 874-2331.

TWELVE (60 seconds)

Woman: Women, this is a message for you. It's about gonorrhoea. Gonorrhoea is still an epidemic, and up to 80% of us will have no early symptoms. Over 15% of us infected with gonorrhoea end up with a serious inflammation of our entire reproductive system before we are treated. It's not a pretty picture, but here's exactly what we need to do: First, have V.D. checkups at least once a year, or more often if we frequently change partners. We can get these through a V.D. clinic or from our physician or gynecologist. It's a good idea to ask our doctors for them specifically at the same time we have our pap tests taken. Second, ask our lovers to be responsible. Men are more likely

to have symptoms of gonorrhoea, and if these signs appear we should be told so that we can seek treatment ourselves. Third, call the V.D. information line at 872-1238 for information on all sexually transmitted infections. V.D. checkups, pamphlets and further assistance can all be obtained through our nearest public health unit. Thousands of women each year in B.C. suffer serious complications from undetected gonorrhoea. It's up to us to change that, to guarantee our own health.

THIRTEEN (30 seconds)

Woman: People are taking their health seriously these days, and one thing that's especially important for all sexually active people is an annual V.D. checkup. V.D. is epidemic in B.C., and over half the people who are infected just don't have any symptoms. So have a V.D. checkup today. They're free and confidential through your local health unit. [local clinic tag]

FOURTEEN (30 seconds)

Venereal disease is a fact of life for every sexually active person. It infects over 50,000 people in B.C. each year. To protect yourself from the serious damages of untreated V.D. call the V.D. Information line today. Just dial 874-0611. A recorded message gives you information on V.D. signs and prevention. That's 874-0611. And for free and confidential treatment, see your local health unit.

Several different radio ads were used throughout the remainder of the campaign, variously stressing the need for checkups, knowledge of symptoms and contact notification. In addition, several shorter ads were used to continue promoting use of the Information Line. A representative selection of these ads are produced below.

FIFTEEN (60 seconds)

[newsroom noises in background]

Bulletin: Gonorrhoea rates continue to skyrocket...

Flash: Thousands of young women suffer acute complications of gonorrhoea infections...

Item: V.D. a serious problem, infecting over 50,000 people each year in B.C....

Announcer: Okay, you've heard it all before, the great war on the gonorrhoea epidemic. But here's something you probably didn't know. We're starting to win it, starting to inch down those statistics...and thanks to all those people in B.C. who went in for V.D. checkups last year, to make sure they didn't have the disease. And thanks, too, to those people who cared enough about their lovers to make sure that when they got a sexually transmitted infection, their lovers were brought in for treatment too. Because of their concern for their own sexual health, and the health of the ones they loved, there's a little less gonorrhoea now than there was a year ago.

But there's still an epidemic because not everyone's doing their bit in the battle. Ask yourself this—when was the last



time you had a V.D. checkup, or really thought seriously about the subject? For information on V.D. symptoms and prevention, call the V.D. information line at 872-1238. For free and confidential V.D. checkups, see your local health unit. If you're not part of the solution, then you just might have the problem!

SIXTEEN (60 seconds)

[light bardic music in background]

"In the spring a livelier iris changes on the burnish'd dove  
In the spring a young man's fancy lightly turns to thoughts of  
love..."

Announcer: But before your thoughts become actions, there's a few other things all men, whether young or old, should consider. Like gonorrhea, an infectious disease passed between two persons during sexual intercourse. Up to 20% of men and over 80% of women won't have early signs of this disease. Worse yet, some women do not get treated until there is a real risk of serious physical damage. So let's be responsible—let's have a V.D. checkup ourselves, to make sure we don't have the disease. And if we do get it, let's make certain that the women in our lives find out, too.

Gonorrhea may not seem a very poetic subject, but it is a fact of life. For more information on free V.D. checkups, and what we can all do to end the gonorrhea epidemic, contact your local health unit.

SEVENTEEN (60 seconds)

"How do I love thee? Let me count the ways...gonorrhoea, herpes, monilia and trich, syphilis, crabs, scabies and warts, NGU and chlamydia, too..."

Announcer: Quite a mouthful. And a lot of these sexually transmitted diseases are epidemic, especially gonorrhoea, a potentially crippling infection. Even worse, some men and many women have few if any early signs of these diseases.

Frightening? Not really, because all you really need to know are three simple things:

First, if you think you have a sexually transmitted disease, see your V.D. clinic right away. Second, have V.D. checkups regularly, to make sure you don't have a disease without having symptoms. Finally, if you do get an infection, make sure your partners find out so they can get treated too.

If everyone did this, there'd be no epidemic. So when you're counting the ways you love your partners, include a V.D. checkup...for the both of you. It's a nice way of saying "I love you."

For information on V.D. symptoms and prevention, call the 24 hour toll-free V.D. information line by dialing operator and asking for Zenith 4014.

EIGHTEEN (30 seconds)

[sounds of birds and bees in background]

Seems like everytime the subject of sex comes up, out comes

the old story of the birds and the bees. But there's one thing that birds and bees never get, and that's venereal disease. To get the inside information on how you can take the risks out of being close, call the 24 hour toll-free V.D. information line. Dial operator and ask for Zenith 4014. That's operator, Zenith 4014.

And for more information and free V.D. checkups, phone your local health unit.

NINETEEN (30 seconds)

[fingers tapping on desk, telephone rings... "This is the V.D. information line, a (short message about..."]

See, it's as simple as that. Just pick up your telephone, dial 872-1238, and you're connected to the V.D. information line, a message that let's you know how to survive the current V.D. epidemic. So call it today. That's 872-1238. And call it anytime you want. It's there 24 hours a day, and it's completely confidential. 872-1238. For more information and free V.D. checkups phone your local public health unit.

B. INFORMATION LINE

The recorded message of the V.D. Information Line was changed three times during the period of the campaign in an effort to improve the quality of information and, following the survey of callers, provide as much essential information in the first minute as possible. Below is the text of the most recent message.

Man: This is the V.D. information line, a short message about some common diseases that are passed on during sexual contact. The first thing you should know about V.D. is that frequently there aren't any symptoms. Gonorrhea is the most common V.D. and up to 20% of men and 80% of women have no noticeable signs of disease during the first several weeks. Men who have symptoms will notice a burning sensation when they urinate and may have a discharge of pus from the tip of the penis. Women who have symptoms may notice an unusual discharge from the vagina and perhaps pain when urinating.

Woman: Left untreated, gonorrhea can cause permanent sterility, arthritis and even heart disease in both men and women. In women it can quickly inflame the whole reproductive system, a condition known as pelvic inflammatory disease. Symptoms of this later stage of gonorrhea include abnormal or no menstruation, aches or pains in the lower back or abdomen, nausea and slight fever, and pain during intercourse. Pelvic inflammatory disease is always a serious condition and should be diagnosed

and treated immediately.

Man: Symptoms of other sexually transmissible diseases include sores around the sex organs—which may be painful or painless—itchiness, swelling or tenderness around the sex organs, pain during intercourse, or any unusual change in menstruation, urination or bowel movements. If any of these signs appear, especially if you have had sex with a new partner in the previous month, you could have an infection and should have it checked out immediately by a V.D. clinic or a physician. Always refrain from any lovemaking until your symptoms have been diagnosed by a qualified medical person.

Woman: Diagnosis and treatment are free and confidential to everyone thirteen and older in any V.D. clinic in the province. To find the location of the V.D. clinic nearest to you, contact your local public health unit. You do not need your parents' or doctors' permission to attend a V.D. clinic and no one will ever find out you have been to a clinic unless you decide to tell them yourself.

Man: There are a few simple things you can do to reduce the risks of physical damage caused by V.D. The most effective way is to properly use a condom, or safe.

Woman: A woman should also use vaginal foam at the same time as this may help in preventing disease infection.

Man: Because frequently there won't be any symptoms of a V.D. infection, have regular checkups. Every sexually active person should have a V.D. checkup at least once a year or more often

if she or he frequently changes sex partners. V.D. checkups are free from your local V.D. clinic and take only a few minutes.

Woman: Finally, whenever you get a V.D. infection always make sure all your partners are notified because they could have the disease and are probably not aware of it. You can tell them yourself or can give their names to a V.D. clinic and clinic staff will contact them. By law, clinic staff cannot tell the people they contact who gave them their names, so everything you say at a V.D. clinic is confidential.

Man: If we all do our part by watching out for V.D. symptoms, having regular V.D. checkups and always making sure our partners are checked out whenever we get a V.D., this epidemic will quickly disappear.

Woman: Thanks for calling the V.D. information line and we wish you a healthy life.

[tag giving the location, hours and phone number of the main Vancouver V.D. clinic]

## C. POSTERS

Attached are black and white reductions of several of the posters which were used in the campaign, arranged in chronological order of production.

The first poster was an unsuccessful attempt to be "literary" and have some fun with the notion of sin and stigma. While the graphic lent itself to frequent pilfering from school halls, it was felt by some community health nurses to have too ambiguous a message for a high school audience.

The second poster attempted to introduce an entirely new terminology (S.T.D.) complete with a graphic that, at first glance, appears to have little to do with V.D. The gay community in Vancouver loved the poster, choosing to interpret "S.T.D.'s in town" as "STUDS in town"...while some Medical Health Officers felt the new terminology was too reminiscent of a certain motor oil additive. It was later felt that the poster, despite its bold caption, contained too much information for the medium, and later posters honed down the quantity of copy.

The third poster attempted to emphasize that any sexually active person was at risk of infection, regardless of age, occupation or sex. The fourth poster pointed out the need for responsible contact notification, while the last poster is self-explanatory.

# HAVING VD IS NO SIN!

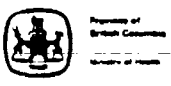


...but doing nothing about it is just stupid!

VENEREAL DISEASE IS EPIDEMIC AND ANY SEXUALLY ACTIVE PERSON CAN GET IT. IF YOU NOTICE ANY SORES OR PAIN AND TENDERNESS AROUND YOUR SEX ORGANS, IF YOU HAVE A DISCHARGE, (A "DRIP"), OR IF IT HURTS WHEN YOU URINATE, YOU COULD HAVE VD, AND LEFT UNTREATED IT CAN DO SERIOUS DAMAGE. SO HAVE A VD CHECK-UP TODAY; IT'S FREE AND ABSOLUTELY CONFIDENTIAL.

*Goldman*

H PIGAN

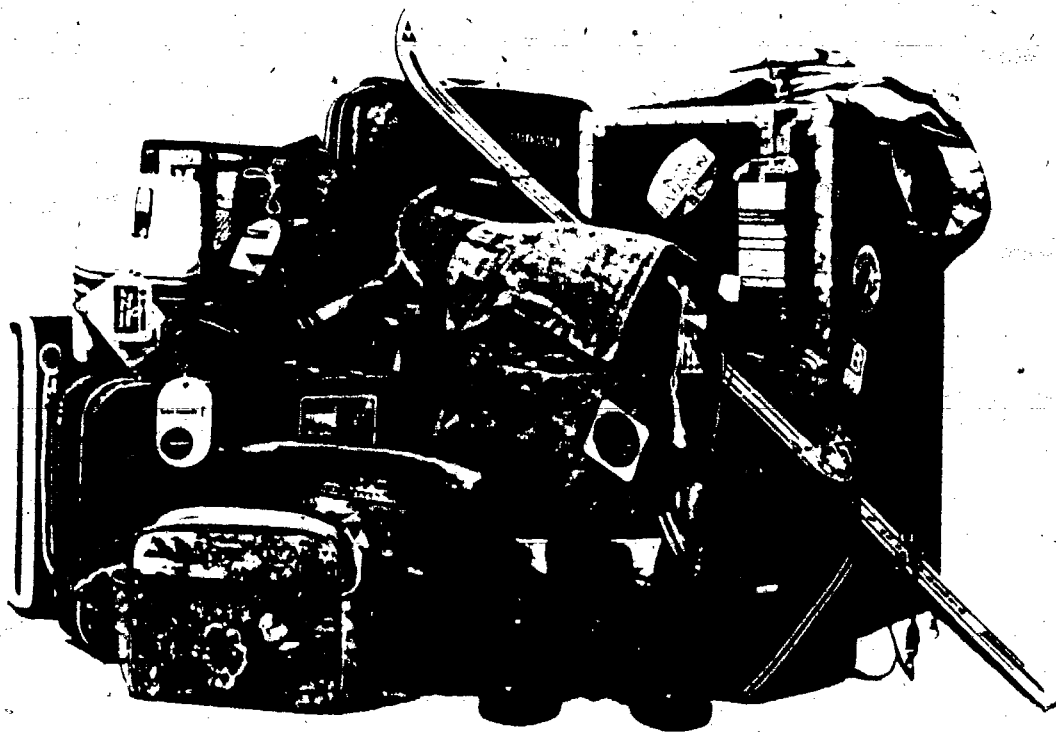


For more information on symptoms and prevention contact your nearest health unit or call the VD HOTLINE Dial operator and ask for Zenith 4014. In Greater Vancouver dial 874-0611

Illustration 9: Having V.D. is no sin!



# STD'S<sup>\*</sup> IN TOWN



<sup>\*</sup>sexually transmissible disease — any disease which can be passed on from person to person during intimate sexual contact.

GONORRHEA IS THE MOST COMMON STD IN CANADA. IT IS A DANGEROUS ILLNESS AND, LEFT UNTREATED,

CAN CAUSE STERILITY, ARTHRITIS AND OTHER SERIOUS DAMAGE. IT'S ALSO AN EPIDEMIC, AND SOMETIMES YOU CAN HAVE THIS DISEASE AND NOT EVEN KNOW IT UNTIL IT'S TOO LATE AND THE DAMAGE HAS BEEN DONE. SO HAVE AN STD CHECK UP TODAY. JUST TO BE SURE, CHECK UPS ARE FREE AND CONFIDENTIAL THROUGH YOUR LOCAL HEALTH UNIT



Province of  
British Columbia  
Ministry of  
Health

For more information on symptoms and prevention contact your nearest health unit or call the STD HOTLINE. Dial operator and 296 for Zenith 4014 in Greater Vancouver dial [REDACTED]

Illustration 10: S.T.D.'s in Town

# PUT YOURSELF IN THE PICTURE

Veneral diseases are sexually transmitted infections that any sexually active person can get. Protect yourself and the ones you love... have a V.D. check up today.

For more information contact your local health unit.



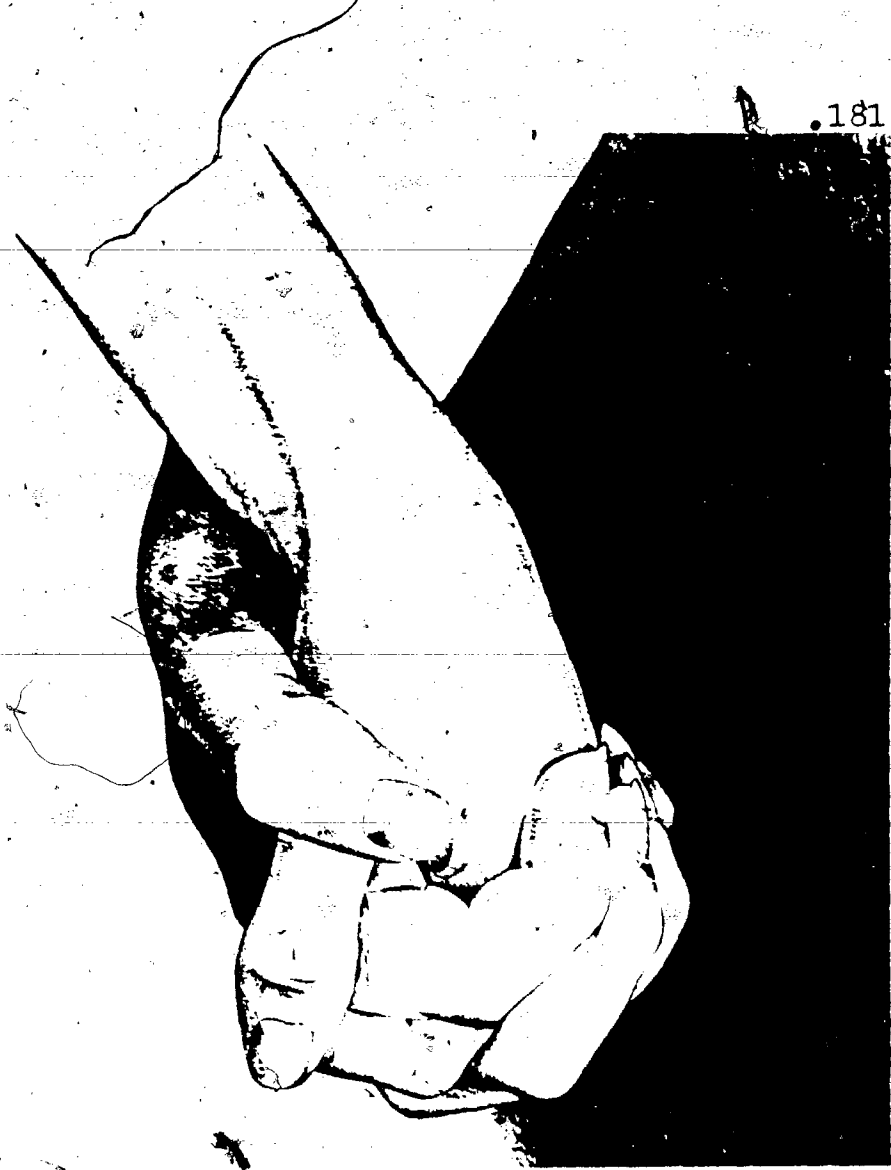
## For 24 hour Information on VD

IN GREATER VANCOUVER  
Dial 872-1238

ANYWHERE ELSE IN B.C.  
Dial '0'  
AND ASK FOR  
Zenith 4014



Province of British Columbia Ministry of Health



# you weren't alone when you got it so don't be alone when you get it treated

Sexually transmissible diseases ("VD") always involve more than just one person. So if you're treated for VD, make sure your partners are, too. Treatment is free and confidential through your local health unit.

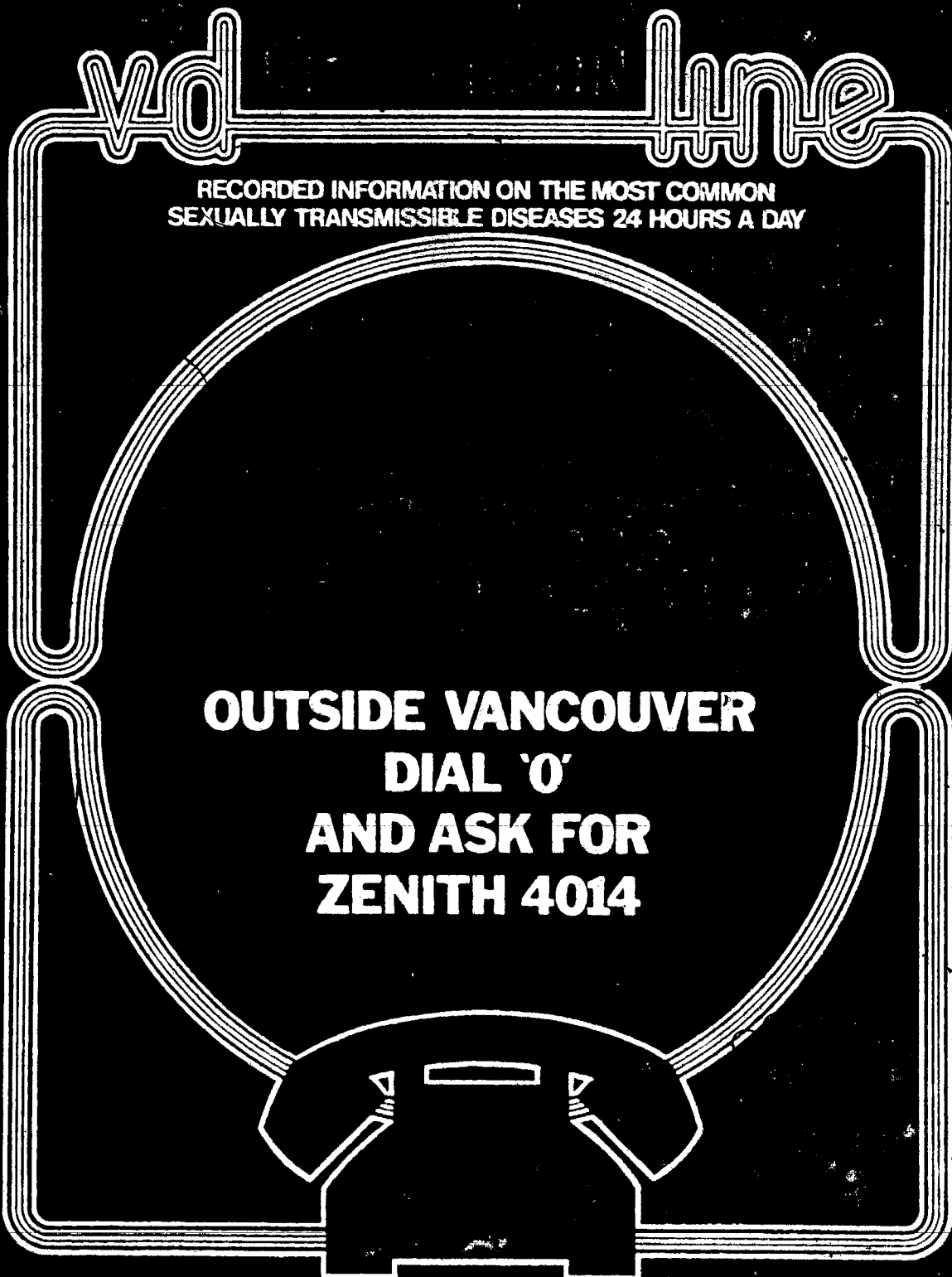
Line. In Vancouver [redacted] Outside Vancouver Zenith 4014.

For more information call the VD Information



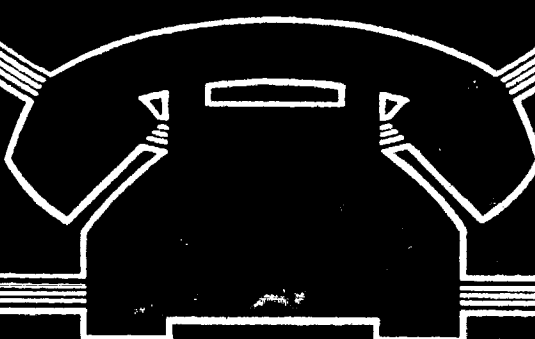
Province of British Columbia  
Ministry of Health

Illustration 12: You weren't alone when you got it...



**RECORDED INFORMATION ON THE MOST COMMON  
SEXUALLY TRANSMISSIBLE DISEASES 24 HOURS A DAY**

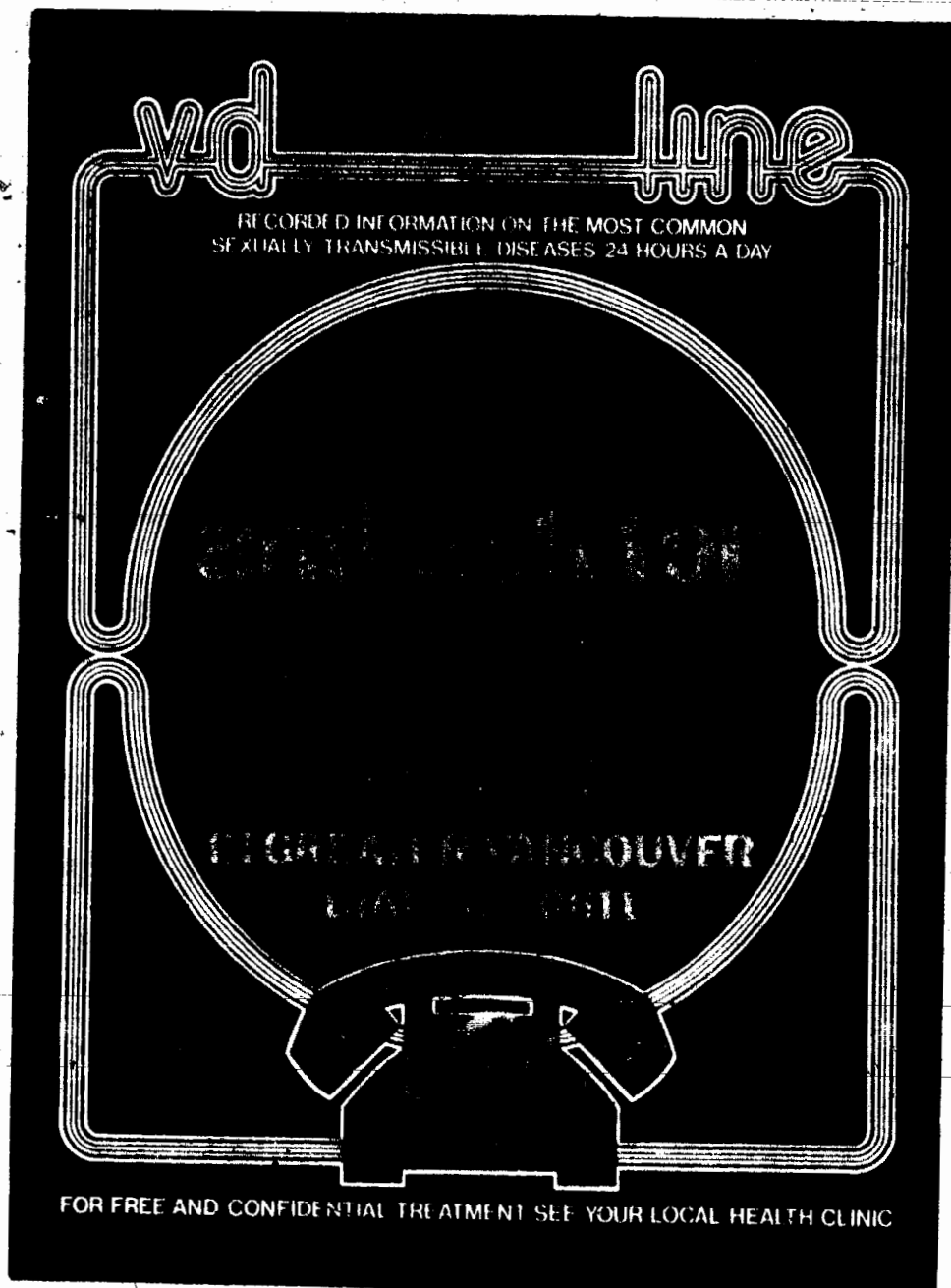
**OUTSIDE VANCOUVER  
DIAL '0'  
AND ASK FOR  
ZENITH 4014**



**FOR FREE AND CONFIDENTIAL TREATMENT SEE YOUR LOCAL HEALTH CLINIC**

Illustration 13: The V.D. Information Line

The last poster was also produced as a small, stick-on decal. Volunteer staff from the gay screening clinic operated by S.E.A.R.C.H. undertook to place over 500 of these decals in the washrooms of all the pubs in the Greater Vancouver area, with the permission of the owners. Below is a sample of the decals used.



## D. BUSBOARDS

The two outside busboards (1 by 3 meters) were simply too large to have reduced. The first busboard used had the following copy:

V.D. WOULD YOU KNOW IF YOU HAD IT?

For confidential information, call the V.D. Information Line, 872-1238.

It was decided in the following year that this particular board contained too much information, so the copy was shortened to read:

V.D. CONFIDENTIAL INFORMATION 872-1238.

This latter busboard used white copy on a dark red background, and was visible literally blocks away from the bus. It spawned more media comments in the Greater Vancouver area than any other V.D. media presentation.

A copy of the inside buscard, advertising Vancouver clinic hours and location, as well as the Information Line, is reduced on the following page.

Illustration 14: Inside buscard



# V.D.

Free and confidential checkups  
 at the V.D. Clinic,  
 828 West 10th. Ave., Vancouver.

Clinic Hours:  
 Monday & Friday 8:30 a.m. - 7:30 p.m.  
 Tuesday to Thursday 8:30 a.m. - 4:00 p.m.  
 Saturday 10:00 a.m. - 1:00 p.m.



## FOOTNOTES TO CHAPTER FOUR

- [i] Part Two is adapted from "The Control of Sexually Transmissible Diseases in British Columbia, Canada: An Outline and Evaluation of a Three Year Promotion Campaign", written by myself in October, 1979 for Health Promotion Programs, B.C. Ministry of Health, and never published. As such, it may seem repetitive in places.
- [ii] From the 1979 Annual Report of the Division of V.D. Control: "This past year saw the development of new nurse-education and teacher-education programs. A number of different workshops were designed by the three members of our health education group dealing with subjects related to contraception, sexually transmitted diseases, sexuality, school programs and improved diagnosis and treatment. Approximately fifty workshops were presented in nine different health units to over 600 nurses, teachers, physicians, social workers, counsellors and school board officials." In the same year, the health education group was directly responsible for classroom presentations before a combined total of approximately 2000 students.
- [iii] This calculation was designed in consultation with a senior research officer with the Vital Registry of the B.C. Ministry of Health.



CONCLUSION

~~Sexually transmitted~~ infections have been bedding down with humankind for at least the past 20 millenia. Throughout this time a vast array of socioenvironmental forces and structures have warped attempts to control their incidence. Ignorance of naturalistic explanations of disease may be cited as the first confound, although the relationship of disease to demons and of venereal disease to sex has created a moral straitjacket from which these diseases have yet to break completely free. The history of V.D. control has been largely one of "blaming the victim" and using the reality of disease infection as a means to enforce certain codes of sexual behaviour. As such, ultimate control of V.D. is also dependent on redressing those social institutions and practices which impose upon sexual behaviour in a more general sense, i.e., sexism/patriarchy, especially as it affects sex role relationships and medical practice.

Control of sexual behaviour is merely one aspect of social control so, by extension, all institutions which impose forms of control by perpetuating political and economic inequality must be dismantled for being potential barriers to disease eradication. The example of post-Revolutionary China indicated the extent to which V.D. control can become part of a massive sociopolitical transformation.

Yet, while struggle on these broader issues should not be

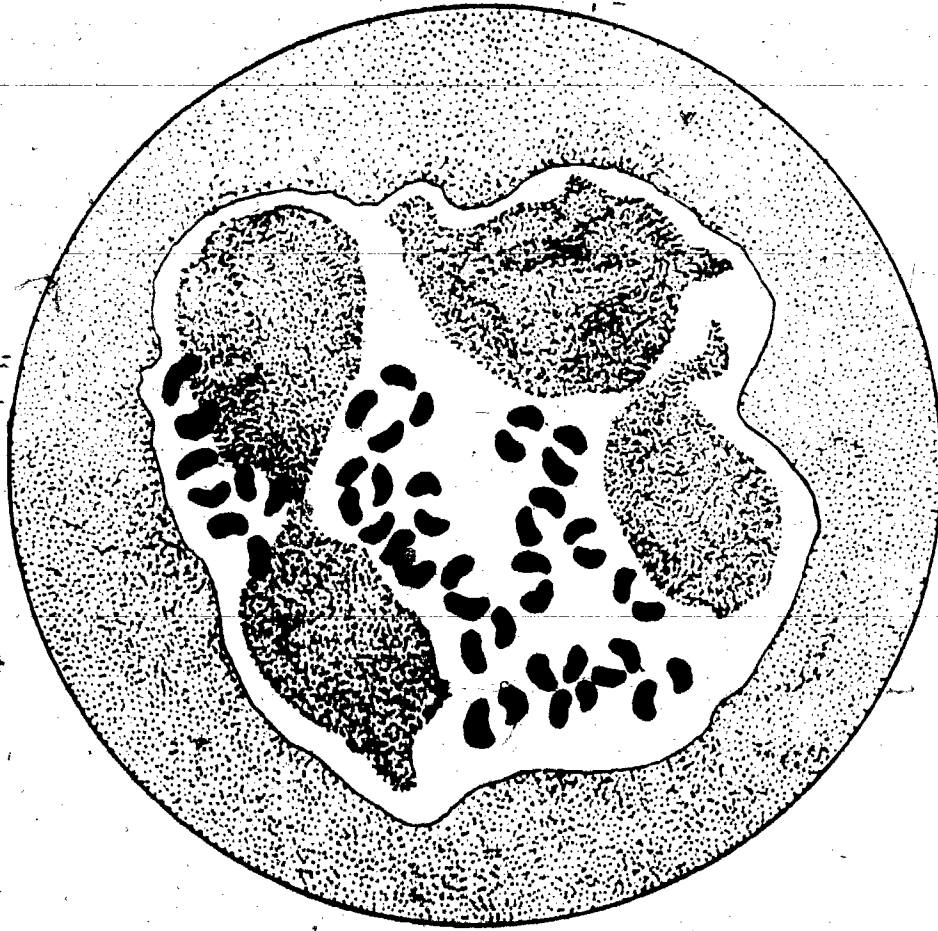
ignored, there are a number of much more focussed steps which can be taken to curb the epidemic. Using an epidemiological model of the relationship between disease organism, host behaviour and the environmental context, it was demonstrated that specific changes (especially in the last two categories) could reduce disease incidence by as much as tenfold. It was further argued that the greatest impediment to initiating those changes lay in the environmental context, specifically with the structure of medical practice and the nature of government control programs.

This returns the matter of "specifics" back to the problematic of struggle with the broader issues of patriarchy and political/economic inequality. It is my belief that as progress is made in inching towards the goal of disease eradication by slowly acting on the specifics of host behaviour and environmental context, the broader issues will also be drawn sharper into focus and challenged. For, as Theodor Rosebury has stated:

If by some chance we could vaccinate against V.D., we might forget all the other troublesome areas of the problem. If not...we shall need to return to [the] social heart of the question and see whether anything can be done about it.

APPENDIX ONE: The Medical Reality of Gonorrhoea

The following pages are taken from the book, Sexually Transmissible Diseases, A Manual for Nurses, designed, written and produced under my direction by the Division of V.D. Control in the summer of 1980.



# GONORRHEA

Gonorrhoea is a reportable disease which infects approximately 35,000 persons in B.C. each year.

**ETIOLOGY:** The causative agent is *Neisseria gonorrhoea*, a gram negative, kidney-shaped diplococcus.

- i) This organism is adapted to moist mucous membranes and is therefore specific to the pharynx, urethra, cervix and anal canal in its initial stages of infection.
- ii) Transmission is through intimate sexual contact which is almost always sexual intercourse.
- iii) Sexual child abuse or incest must be considered in the cases of gonococcal infection in children over the age of 1; prior to age 1, contaminated fomites may be responsible for transmission.
- iv) *N. gonorrhoea* is frequently accompanied by other sexually transmitted diseases.
- v) Incubation period: 2-9 days.
- vi) Transmission to the neonate may occur during delivery (gonococcal ophthalmia neonatorum).

### SIGNS AND SYMPTOMS:

**Women:** 85% of women do not report symptoms of gonorrhoea. Many women will, however, reveal a history of mild symptoms which they may have dismissed as insignificant or unrelated to gonorrhoea.

- i) urethritis – Patients may complain of urgency, frequency or discomfort on urination.
- ii) cervicitis – Often symptom free.
  - mucopurulent discharge from cervical os
  - cervical friability and edema
  - vaginal discharge without accompanying vaginitis.

Initial symptoms, if present, will usually disappear after 2-4 weeks. The infection may persist resulting in the complications discussed later in this section.

**Men:** Approximately 5-15% of men are asymptomatic; the remainder have obvious symptoms which may be ignored or which may cause them to seek treatment.

- i) urethritis – This is the main symptom of a gonococcal infection.
  - Initially, a mild tingling sensation during urination is noticed. Two to four days later dysuria usually becomes severe.
- ii) urethral discharge – If present, the discharge is often thick, yellow and purulent.

Untreated, the symptoms usually subside 2-3 weeks after their onset. The infectious process will continue, resulting in transmission of the infection to sexual partners and the potential development of the complications discussed later in this section.

**Anal infections:**

- i) The anus may become infected through anal intercourse. Women may also develop anal infections by contamination from infected vaginal discharge.
- ii) Anal infections are usually asymptomatic; examination may reveal slight discharge and swelling of the mucosa of the anal canal.

**Pharyngeal infections:**

- i) Oral-genital sex may result in a pharyngeal infection.
- ii) Infections of the pharynx are often asymptomatic; it is therefore advisable to obtain a careful history of sexual practices to determine the possibility of a pharyngeal infection.

**DIAGNOSIS:** The diagnosis of gonorrhea is established by a history of exposure and/or clinical examination, supported by the laboratory examination of the discharge by smear and/or culture.

- i) Slide smear should be done of the male urethral discharge.
- ii) A swab for culture should also be taken for a confirmatory diagnosis, and when there is no discharge. A swab should be taken from the female cervix and prepared for smear and culture. Following this, a bimanual pelvic exam should be done routinely to rule out the presence of pelvic inflammatory disease.
- iii) A swab for culture may be taken from the urethra when there is urethritis, during pregnancy and post-hysterectomy.
- iv) A swab for culture may be taken from the rectum and/or pharynx when exposure at these sites is suspected or reported.
- v) A test of cure should be done not less than 72 hours following treatment. The test of cure should be a culture from the infected area.

**DIFFERENTIAL DIAGNOSIS:** *T. vaginalis* (by vaginal smear), *N. gonorrhoea*, *H. vaginalis* and *C. albicans* infections (by culture of vaginal swab) can be simultaneously diagnosed. If the examiner finds a debatable symptomatic picture she/he should request that all four causative organisms be looked for in the laboratory.

If urethritis or PID is suspected but has not been diagnostically differentiated from NGU (i.e. chlamydial) PID, the patient should be treated with tetracycline prior to laboratory confirmation.

**COMPLICATIONS:**

- Men:**
- i) As the infection moves from the anterior to the posterior urethra, inflammatory reactions may occur in the urethral glands.
  - ii) Prostatitis may occur.
  - iii) Infrequently, epididymitis followed by scarring may occur resulting in permanent sterility.
  - iv) In rare cases, urethral strictures may result due to scar retraction.

- Women:**
- i) Pelvic inflammatory disease occurs in 10-30% of all women with an untreated gonococcal infection. Diagnosis of PID is based upon a history of exposure and any or all of the following symptoms: lower abdominal pain, dysmenorrhea, dyspareunia, abdominal cramping or tenderness, abnormal vaginal bleeding or lower back pain.

- ii) A bimanual examination manifesting bilateral tenderness or pain upon moving the cervix, uterus and adnexa is usually most significant. Laboratory diagnosis by culture may be ineffective if the organism has left the cervical area. Treatment should not be delayed for lab confirmation as sterility is a definite risk of PID.

#### Disseminated Gonococcal Infection (DGI):

- i) Arthritis and dermatitis are the most common manifestations of DGI.
- ii) Knees, ankles and wrists are the usual sites of arthritis.
- iii) Skin lesions are most commonly found on the distal extremities.

#### Conjunctivitis:

- i) In adults, gonococcal conjunctivitis is usually a result of auto-inoculation of the eyes with a finger contaminated with genital secretions.
- ii) Highly contagious via hands, fomites, etc.

#### Neonatal conjunctivitis: (Ophthalmia neonatorum; Gonococcal ophthalmia)

- i) Transmitted to the infant during passage through the birth canal.
- ii) In B.C., all neonates are prophylactically treated at birth, as required by law.
- iii) Diagnosis may be made by smear and culture from conjunctiva or gastric aspirate.

#### TREATMENT:

- i) It is advisable to immediately treat all contacts of persons with a confirmed diagnosis of gonorrhea, prior to receiving test results.
- ii) For contacts or confirmed cases of *N. gonorrhoea*, the recommended treatment schedule is as follows:

Ampicillin 3.5 gm stat

OR

Amoxicillin 3.0 gm stat

OR

Aqueous Procaine penicillin G 5.0 MU IM

Each with  
Probenecid  
1.0 gm stat

- iii) In male patients, when a diagnosis of NGU has not been differentiated from gonococcal urethritis, tetracycline is effective treatment for both conditions.

Tetracycline 500 mg quid x 7 days

- iv) For any patient allergic to penicillin, tetracycline should be prescribed as above. Tetracycline should be taken on an empty stomach one hour before or two hours after meals.

If the patient experiences gastrointestinal upset while on tetracycline she/he should take the drug with meals and avoid dairy products and antacids.

Patients should be advised to avoid direct sunlight. Photosensitivity may result in a severe sunburn. Patients should be instructed to report any skin discomfort.



## STD CHECK-UP

1. The nurse or doctor will ask you about your recent sexual activity. This information is important so that she or he can determine the cause and date of possible transmission. (All the organisms have a different incubation period). It is important to find out if you have had oral or anal sex because gonococcal infections in these areas are often asymptomatic (without symptoms).
2. The doctor or nurse will take a blood sample for a syphilis test.
3. The doctor or nurse will then do a different examination for men and women.
  - a) Women will have a pelvic examination. Tests are taken from the cervix and the vagina where an infection may be present. In order to do this a speculum is used. This procedure is not painful but may be slightly uncomfortable.
  - b) Men will have a culture and/or a smear taken from the urethra or other sites of infection. The doctor or nurse uses a Q-tip to take a sample from the opening of the penis, rectum or from the throat.
4. If gonorrhea is suspected it is important to find out the names of your contact or contacts. Confidentiality is always maintained. Confidentiality means that no one can reveal your name, the date or place of contact, or any other information about you to the people whom you name as contacts.

You will have one to two days to contact your partner(s). If you do not, or do not wish to, the health unit will contact them for you, respecting your confidentiality.
5. Slides documenting "an STD check-up" can be obtained from the Division of V.D. Control, 828 West 10th Avenue, Vancouver, B.C.

**What is it?**

PID is an increasingly common and serious disease of sexually active women. The initials stand for Pelvic Inflammatory Disease, which means an infection (germs) in the pelvis usually affecting a woman's fallopian tubes. It can be:

- i) acute — that is, sudden onset with severe pain in the lower stomach, fever, and vaginal discharge, or
- ii) chronic — that is, less severe pain which lasts longer, or
- iii) recurrent — that is, signs of infection going away and coming back more than once.

**What causes it?**

Usually what happens first is the vagina or cervix gets infected with germs. These germs may go away or stay just in the cervix; but they may also climb from the cervix (opening of the womb) into the uterus and tubes. Then these germs cause an infection deep inside the tubes, and that is the PID. Gonorrhea germs will climb up into the uterus if the disease isn't detected or treated promptly; so may other germs, such as chlamydia. Some very rare causes of PID are tuberculosis and tropical parasites, but these usually infect the pelvic area through the blood stream instead of through the cervix.

Also, some medical procedures such as insertion of intrauterine devices (IUD's), therapeutic abortions, or D & C's, all involve pushing something through the cervix and this may result in infection of the uterus and tubes. IUD's are a special problem because even after they are inserted their strings come down through the opening of the uterus and may be a path for germs, like gonorrhea, to climb up and cause PID.

Unfortunately the actual reason that a particular woman has PID is often never found out. For example, even if the woman has gonorrhea germs, some of which have climbed up and caused the PID, the remaining germs in her cervix may have died off so that the tests for gonorrhea may be negative. Gonorrhea often has no symptoms in women until the PID sets in. There may be other germs entirely which have caused the PID.

**Why is it increasing?**

A tough question . . . More people have intercourse with more people these days. Not so many people use safes, which do prevent spread of disease if used properly. There is a gonorrhea epidemic everywhere in North America. More women are using IUD's. Birth control pills may make it easier for germs to grow in the vagina. But essentially no one knows for sure why there is a sudden increase in the amount of PID.

**How do I know I have it?**

PID is an infection caused by germs which affect the uterus and tubes, just as tonsillitis is an infection of the tonsils. Infections are painful; they may create pus and cause swelling of the tissues involved; they will cause upsets in how the infected areas work; and, they will upset the body in general, causing fever and chills, nausea, headaches and so on. A woman with PID may first notice a vaginal discharge ("pus") with itching and a smell or odour.

She will have pain, usually cramps, in the lower abdomen, and may really have a lot of pain deep inside when having intercourse (sex), or just walking around. Her stomach may feel full and bloated. Her periods may have unusual cramping, unusual amounts of bleeding, and be of unusual length.

If a woman has some or all of these complaints, she needs to be examined as soon as possible to see if the cause is PID or, if not, what is the cause. The examination should include both a vaginal examination with a speculum (so the examiner can look inside and take a specimen of the pus, if there is pus); and an internal exam where the examiner uses her/his fingers to feel the uterus and tubes to see if they are swollen and painful. The examination may be uncomfortable if there is an infection, but it is absolutely necessary. You should ensure that you receive this complete examination.

The treatment for the acute form of PID is large doses of bed rest and antibiotics. It is important to take all the antibiotics as directed to make sure that all the germs are killed. Antibiotics alone cannot heal your body. The body needs all the help it can get in the form of rest (bed rest if possible, avoidance of intercourse, no strenuous activity) and good nutrition, especially vitamins and proteins to help healing. If an IUD is in place it should be removed, especially if the infection won't go away. With early treatment, the PID can be completely cured. The later the treatment, the more serious the illness may become.

#### Dangers of PID

- 1) The infection may get bad enough to require treatment in hospital.
- 2) With inadequate treatment, or sometimes even with adequate treatment, the symptoms may come back — sometimes several times in a year. Each time suspicious symptoms recur they should be checked out by examination. For this "recurring" PID, treatment must be worked out on an individual basis, depending on how healthy the woman is or how severe is the attack.
- 3) Each attack of acute PID increases the chance of permanent damage (scarring) of the tubes. The tubes may become so scarred that they are totally blocked, the woman's eggs (ova) can't get through them, and therefore she is sterile. The tubes may become partly blocked or twisted so that a fertilized egg may get stuck there, causing a pregnancy in the tube ("ectopic pregnancy"). Tubal pregnancies require emergency surgery to remove the tube. Tubal pregnancies are many times more common in women who have had PID.
- 4) Rarely, the tube(s) become so swollen and full of pus that it (they) have to be surgically removed.

#### Prevention

There is no sure way to prevent PID, but some things are helpful:

- 1) Safes (condoms) — an old-fashioned way to prevent disease which may be a good idea if you or your partner sleep with other people. He may claim that it's not as much fun, but you won't get sick, and it's your body.
- 2) Examinations whenever you're worried. If you have several sexual partners, it's a good idea to get checked for gonorrhea routinely whether or not you have any symptoms, since there is an epidemic of gonorrhea. There are now more and more males who may have gonorrhea without symptoms. Early treatment is always much easier than late treatment.

3) All of the above measures especially apply if you have an IUD. In fact, if you have had PID once, an IUD may not be for you.

4) If you have gonorrhea (man or woman) it is your responsibility to make sure all your contacts get treatment. You can cause a lot of trouble for someone else if you don't tell them.

APPENDIX TWO: Selected Data on Sexually  
Transmissible Diseases

Data has been taken from the following sources:

British Columbia—Division of V.D. Control, Annual Report  
1979, Ministry of Health, Victoria, 1980

Canada—Bureau of Epidemiology, Sexually Transmitted  
Diseases Canada, 1976, National Health and  
Welfare, 1977

United States—Center for Disease Control, Morbidity and  
Mortality Weekly Report: Annual Summary  
1979, 1980, 28(54)

(source: Division of V.D. Control. Annual Report, 1979)

Table 1. NEW NOTIFICATIONS<sup>1</sup> OF VENEREAL INFECTION<sup>2</sup>, AND RATES PER 100,000 POPULATION  
BRITISH COLUMBIA, 1946 - 1979

Year	Gonorrhoea			Syphilis			Other Venereal Disease			Total Venereal Disease		
	Number	Rate	Per cent	Number	Rate	Per cent	Number	Rate	Per cent	Number	Rate	Per cent
1946 - 1950 <sup>3</sup>	3,921	364.5	75.2	1,233	114.6	23.7	58	5.4	1.1	5,212	484.5	100
1951 - 1953 <sup>3</sup>	2,913	232.8	90.4	293	23.4	9.0	18	1.4	0.6	3,224	257.7	100
1956 - 1960 <sup>3</sup>	3,516	231.7	93.3	247	16.3	6.6	5	(4)	0.1	3,768	248.3	100
1961 - 1965 <sup>3</sup>	4,894	286.9	92.6	391	22.9	7.4	-	-	-	5,285	309.8	100
1966	5,415	289.0	96.0	226	12.1	4.0	-	-	-	5,641	301.1	100
1967	4,706	242.0	95.7	204	10.5	4.2	6	0.3	0.1	4,916	252.8	100
1968	4,179	208.6	94.2	257	12.8	5.9	2	(4)	-	4,438	221.6	100
1969	4,780	232.0	95.3	236	11.5	4.7	1	(4)	-	5,017	243.5	100
1970	6,070	285.2	94.3	365	17.2	5.7	2	(4)	-	6,437	302.5	100
1971	7,116	325.7	94.3	430	19.7	5.7	1	(4)	-	7,547	345.5	100
1972	7,921	353.4	95.5	376	16.8	4.5	1	(4)	-	8,298	370.2	100
1973	8,955	388.9	95.5	423	18.4	4.5	3	(4)	-	9,381	407.4	100
1974	9,284	390.8	95.7	415	17.5	4.3	3	(4)	-	9,702	408.4	100
1975	9,793	402.5	95.2	479	19.7	4.7	10	0.4	0.1	10,282	422.6	100
1976	9,728	394.4	96.8	321	13.0	3.2	1	(4)	-	10,050	407.4	100
1977	9,699	389.0	97.5	249	10.0	2.5	-	-	-	9,948	399.0	100
1978	9,004	355.9	97.0	276	10.9	3.0	-	-	-	9,280	366.8	100
1979	9,461	368.6	96.9	299	11.6	3.1	1	(4)	-	9,761	380.2	100

1. Excludes transfers and transients, and so for all tables.  
 2. Excludes gonorrhoea epidemiological, syphilis epidemiological, and non-gonococcal urethritis, and so for all tables.  
 3. Five year averages.  
 4. Rates based on 5 cases or less are not shown.  
 .. Less than 0.05 percent.

Table 8. NEW NOTIFICATIONS OF GONORRHOEA AND RATES PER 100,000  
POPULATION, BY HEALTH JURISDICTION OF REPORTING AGENCY,  
BRITISH COLUMBIA, 1978 AND 1979

Health Jurisdiction	Number		Rate	
	1978	1979	1978	1979
<u>Health Units &amp; Nursing District</u> . . . . .	3,867	3,843	252.9	247.4
East Kootenay . . . . .	94	53	145.5	79.4
Selkirk . . . . .	34	67	123.6	237.3
West Kootenay . . . . .	52	42	120.1	96.2
North Okanagan . . . . .	167	130	203.7	158.3
South Okanagan . . . . .	233	350	179.2	266.8
South Central . . . . .	486	271	487.5	270.1
Upper Fraser Valley . . . . .	140	160	152.2	173.1
Central Fraser . . . . .	207	218	187.3	192.6
Boundary . . . . .	246	307	120.9	149.2
Simon Fraser . . . . .	332	411	252.5	307.3
Coast-Garibaldi . . . . .	93	97	202.2	209.9
Central Vancouver Island . . . . .	293	259	200.1	173.6
Upper Island . . . . .	208	199	286.9	267.3
Cariboo . . . . .	223	248	411.4	451.5
Skeena . . . . .	342	330	483.7	459.1
Peace River . . . . .	212	167	469.0	361.4
Northern Interior . . . . .	484	515	458.3	476.7
Ocean Falls Nursing District . . . . .	21	19	512.2	370.1
<u>Greater Vancouver Metropolitan Board of Health Area</u> . . . . .	4,348	4,765	569.1	617.4
Burnaby . . . . .	168	166	125.4	121.8
North Shore . . . . .	129	185	94.9	133.2
Richmond . . . . .	110	101	128.7	115.7
Vancouver City (Incl. U.E.L.) . . . . .	3,941	4,313	964.7	1,053.7
<u>Capital Regional District Community Health Services</u> . . . . .	784	836	333.9	349.5
<u>Remainder of the Province</u> <sup>1</sup> . . . . .	4	10	181.8	389.6
<u>Not Stated, Not Known, or Not Allocated to a School District</u> . . . . .	1	7	(2)	(2)
<b>Grand Total</b> . . . . .	<b>9,004</b>	<b>9,461</b>	<b>355.9</b>	<b>368.6</b>

1. See Footnote 2 to Table 7.

2. Rates not calculated, as the required population bases not available.

(source: Division of V.D. Control. Annual Report, 1979)

Table 7. FEMALE NAMED CONTACTS<sup>1</sup> TO MALE NEW NOTIFICATIONS OF GONORRHOEA,  
BY HEALTH JURISDICTION OF REPORTING AGENCY, SHOWING NUMBER OF CONTACTS  
PER NOTIFICATION AND PERCENTAGE OF CONTACTS TREATED,  
BRITISH COLUMBIA, 1979

Health Jurisdiction	Male New Notifications Reported in Health Jurisdiction	Female Named Contacts			
		Number	No. Per New Notification	Number Treated	Percentage Treated
<u>Health Units &amp; Nursing District</u>	2,398	1,786	0.7	498	27.9
East Kootenay . . . . .	39	20	0.5	2	10.0
Selkirk . . . . .	40	27	0.7	12	44.4
West Kootenay . . . . .	27	18	0.7	6	33.3
North Okanagan . . . . .	66	60	0.9	20	33.3
South Okanagan . . . . .	192	154	0.8	40	26.0
South Central . . . . .	170	146	0.9	41	28.1
Upper Fraser Valley . . . . .	96	67	0.7	22	32.8
Central Fraser . . . . .	115	75	0.7	25	33.3
Boundary . . . . .	164	66	0.4	12	18.2
Simon Fraser . . . . .	221	181	0.8	47	26.0
Coast-Garibaldi . . . . .	63	45	0.7	13	28.9
Central Vancouver Island . . . . .	184	137	0.7	24	17.5
Upper Island . . . . .	153	94	0.6	21	22.3
Cariboo . . . . .	168	122	0.7	44	36.1
Skeena . . . . .	235	180	0.8	67	37.2
Peace River . . . . .	142	120	0.8	20	16.7
Northern Interior . . . . .	309	257	0.8	81	31.5
Ocean Falls Nursing District . . . . .	14	17	1.2	1	5.9
<u>Greater Vancouver Metropolitan Board of Health</u>	3,230	1,553	0.5	507	32.6
Burnaby . . . . .	85	26	0.3	6	23.1
North Shore . . . . .	98	37	0.4	10	27.0
Richmond . . . . .	52	29	0.6	10	34.5
Vancouver City (Incl. U.E.L.) . . . . .	2,995	1,461	0.5	481	32.9
<u>Capital Regional District Community Health Services</u>	476	241	0.5	42	17.4
<u>Remainder of the Province</u> <sup>2</sup>	7	3	0.4	-	-
<u>Not Stated, Not Known, or Not Allocated to a School District</u>	7	2	0.3	-	-
Grand Total . . . . .	6,118	3,585 <sup>1</sup>	0.6	1,047	29.2

1. Excludes 129 female named contacts in the Province who were named by patients investigated outside British Columbia.

2. Includes communities and their vicinities in School District 87 unallocated to Health Units, such as Atlin, Babine and Telegraph Creek in the Northern Section of the Province.

(source: Division of V.D. Control, Annual Report, 1979)



Table 3. NEW NOTIFICATIONS OF VENEREAL INFECTION,  
BY REPORTING AGENCY AND DIAGNOSIS,  
BRITISH COLUMBIA, 1979

Reporting Agency	Total V.D.	Gonorr- hoea	Syphilis				
			Total	Primary	Second- ary	Early Latent	Other
<u>Main Vancouver Clinic</u> (Provincial Health Building)	2,880	2,696	184	38	39	79	28
<u>Vancouver Downtown Clinics</u> <sup>1</sup>	485	482	3	2	1	-	-
<u>Health Units &amp; Public Health Field Staff</u> <sup>2</sup>	1,596	1,581	15	5	10	7	2
<u>Private Physicians in B. C.</u>	4,535 <sup>3</sup>	4,443	91	20	17	32	22
<u>Medical Institutions</u> <sup>4</sup>	164	159	5	-	2	-	3
<u>Penal Institutions</u>							
<u>Municipal</u>							
Vancouver City Gaol <sup>5</sup>	61	61	-	-	-	-	-
<u>Provincial</u>							
Oakalla Prison Farm, Burnaby (Male)	5	5	-	-	-	-	-
<u>Federal</u>							
B. C. Penitentiaries	-	-	-	-	-	-	-
<u>Tri-Services (Canadian Armed Forces)</u>	35	34	1	-	-	-	1
<u>Other</u>	-	-	-	-	-	-	-
<u>Not Stated or Not Known</u>	-	-	-	-	-	-	-
<b>Total - All Agencies</b>	<b>9,761<sup>3</sup></b>	<b>9,461</b>	<b>299</b>	<b>65</b>	<b>60</b>	<b>118</b>	<b>56</b>

1. Downtown Community Health Society and Pine Clinics
2. Field Staff referred to are those for areas not allocated to health units.
3. Includes 1 case of Chancroid.
4. Includes provincial mental and tuberculosis hospitals and infirmaries, general hospital out-patient departments and public wards, and Department of Veterans' Affairs veterans' wards in hospitals at Vancouver and Victoria.
5. Special clinic maintained directly by the Division of V.D. Control within the Gaol.

(source: Division of V.D. Control. Annual Report, 1979)

**APPENDIX E2**

**GONORRHEA  
RATES PER 100,000 POPULATION**

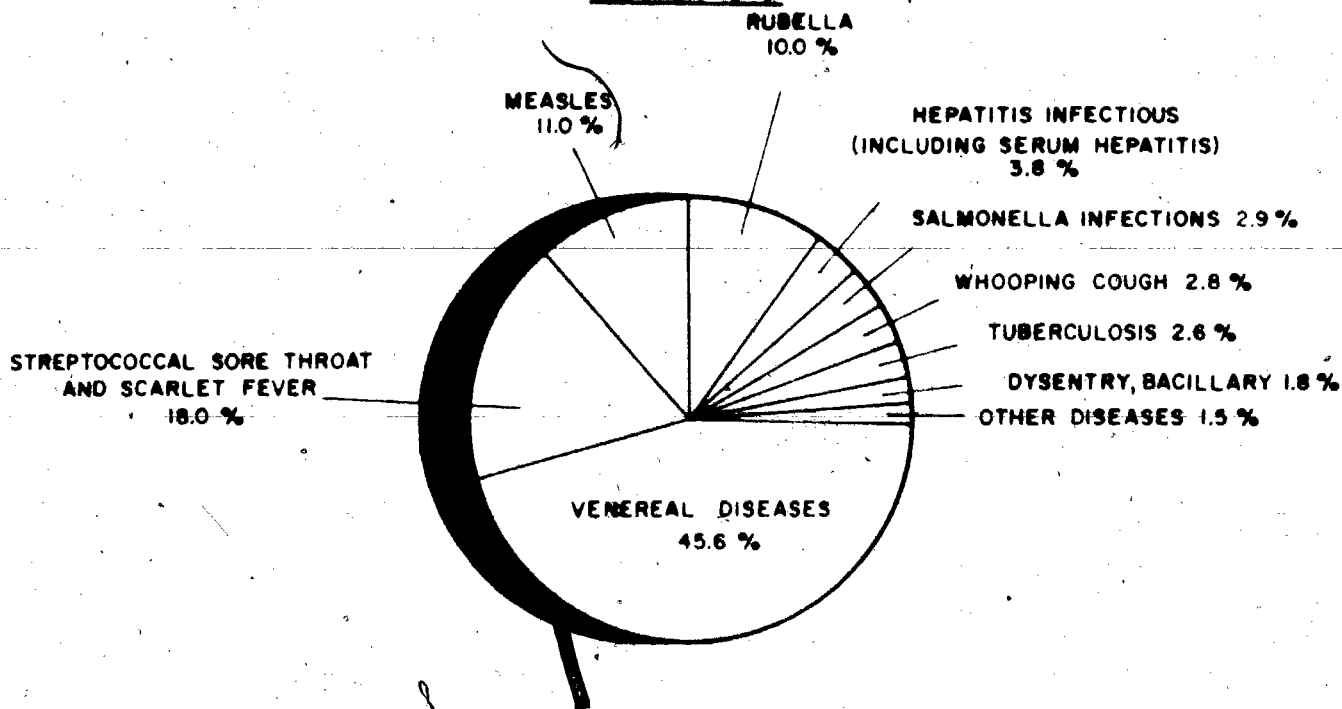
YEAR - ANNEE	CANADA	NFLD. - T.-N.	P.E.I. - I.P.E.	N.S. - N.-E.	N.B.	QUE.	ONT.	MAN.	SASK.	ALTA. - ALB.	B.C. - C.-B.	YUKON	N.W.T. - T.N.-O.
1927	47.2			1.0			54.6						
1928	54.4			0.4			62.9						
1929	60.7			1.6			69.8						
1930	65.4			24.7			71.5						
1931	46.6			16.6			80.3						
1932	47.2			16.0			81.3						
1933	40.1			19.8			68.0						
1934	35.3			22.4			59.1						
1935	41.6			20.7			70.5						
1936	40.7		2.2	14.9			69.6						
1937	55.7			17.1			95.7						
1938	59.6			16.6			114.1						
1939	55.0			51.5			111.2						
1940	61.0		47.9	39.9			121.9				15.5		
1941	68.2		1.1	38.9			146.2			0.1			
1942	92.0		14.4	31.1			160.1	162.0					
1943	113.5		1.1	57.6	65.1		165.2	258.3	71.1				
1944	106.8		22.0	272.2	198.0	121.7	199.5	258.9	134.5	188.4	356.6		
1945	209.3		45.7	190.0	251.0	145.4	205.6	721.3	292.5	252.8	590.7		
1946	214.5		103.2	150.8	173.6	156.3	178.9	424.3	255.0	301.7	452.5		
1947	173.7		123.4	132.7	153.0	156.9	116.5	260.5	152.9	273.6	386.3		
1948	144.9		74.2	98.4	36.4	138.3	93.4	199.3	120.0	237.9	354.3		
1949	131.1		50.0	86.5	101.8	122.5	75.5	191.5	109.2	209.8	344.4		
1950	117.7	97.7	26.0	78.4	80.7	106.9	63.1	165.0	107.5	217.0	321.3		
1951	102.5	80.0	39.6	59.8	71.4	85.9	53.5	162.8	118.2	199.1	283.5		
1952	99.9	89.3	37.0	44.6	25.5	79.5	50.1	158.9	150.1	251.8	293.7		
1953	104.6	106.6	27.7	72.9	32.1	84.6	50.4	155.9	160.9	297.7	245.5		
1954	101.4	98.7	21.8	69.7	34.4	81.1	48.3	167.5	161.6	266.7	211.5		
1955	91.2	36.6	50.0	79.8	48.6	67.3	42.3	144.8	128.8	262.5	196.3	656.4	
1956	90.6	104.1	37.3	59.9	34.4	59.9	34.4	159.5	131.5	253.3	246.1	136.1	
1957	86.4	90.4	19.2	59.4	33.8	51.5	34.0	142.6	144.7	215.4	256.0	1,155.5	
1958	88.1	111.9	19.0	31.7	48.7	53.9	38.4	159.8	161.5	211.3	255.9	1,469.2	525.0
1959	84.8	98.2	7.9	52.0	48.1	44.9	38.3	183.6	158.0	192.9	217.7	1,338.5	214.5
1960	87.6	73.4	5.8	63.3	52.8	47.4	41.5	208.8	151.1	198.3	221.7	350.0	336.4
1961	90.2	60.3	28.8	46.9	47.8	52.2	37.3	236.2	165.2	205.6	225.0	1,585.7	600.0
1962	95.2	51.3	31.2	75.9	46.1	45.8	36.4	194.1	232.1	260.0	258.6	1,486.7	712.0
1963	102.5	60.5	24.1	46.5	52.2	44.6	41.2	188.2	229.3	292.7	291.9	880.0	715.4
1964	106.9	59.6	17.4	65.0	66.9	41.7	40.0	221.5	212.2	275.7	357.1	580.9	1,492.0
1965	104.1	77.7	16.0	60.3	60.0	36.9	37.8	203.9	228.0	258.3	340.1	1,192.9	2,448.1
1966	107.3	105.5	20.2	54.9	57.4	37.3	46.3	281.1	235.9	255.6	297.7	2,235.7	2,124.1
1967	110.8	98.4	34.9	78.9	70.5	69.7	49.1	260.1	231.0	256.7	244.7	2,746.7	2,393.1
1968	108.6	58.0	19.1	53.2	64.6	59.2	57.4	248.3	218.1	244.4	207.7	2,506.7	2,358.7
1969	129.0	82.1	16.4	39.7	68.0	75.4	84.8	275.0	247.4	254.5	255.6	1,353.3	1,365.6
1970	147.6	89.0	19.1	129.1	84.5	76.0	109.8	291.1	240.7	268.1	281.2	1,431.2	2,359.4
1971	158.7	68.7	27.0	115.6	52.1	64.7	112.6	334.6	301.4	294.1	320.3	1,970.6	5,014.1
1972	189.9	64.5	37.2	108.9	59.2	65.1	172.0	349.7	348.1	353.2	353.3	1,444.8	4,734.4
1973	205.2	93.4	48.7	129.7	56.8	60.1	171.2	357.4	400.5	437.7	381.5	1,349.2	6,306.9
1974	212.4	106.0	47.1	144.9	39.8	55.1	192.9	351.9	371.6	468.3	384.4	1,341.2	5,506.5
1975	222.6	117.0	37.0	140.5	61.3	62.2	201.1	416.3	422.4	420.1	397.4	2,149.0	6,300.0
1976	229.5	141.9	142.0	112.3	44.6	67.0	209.5	455.0	374.4	441.5	394.5	1,761.9	3,780.2

(source: National Health and Welfare. Sexually Transmitted Diseases Canada, 1976)

FIG. A

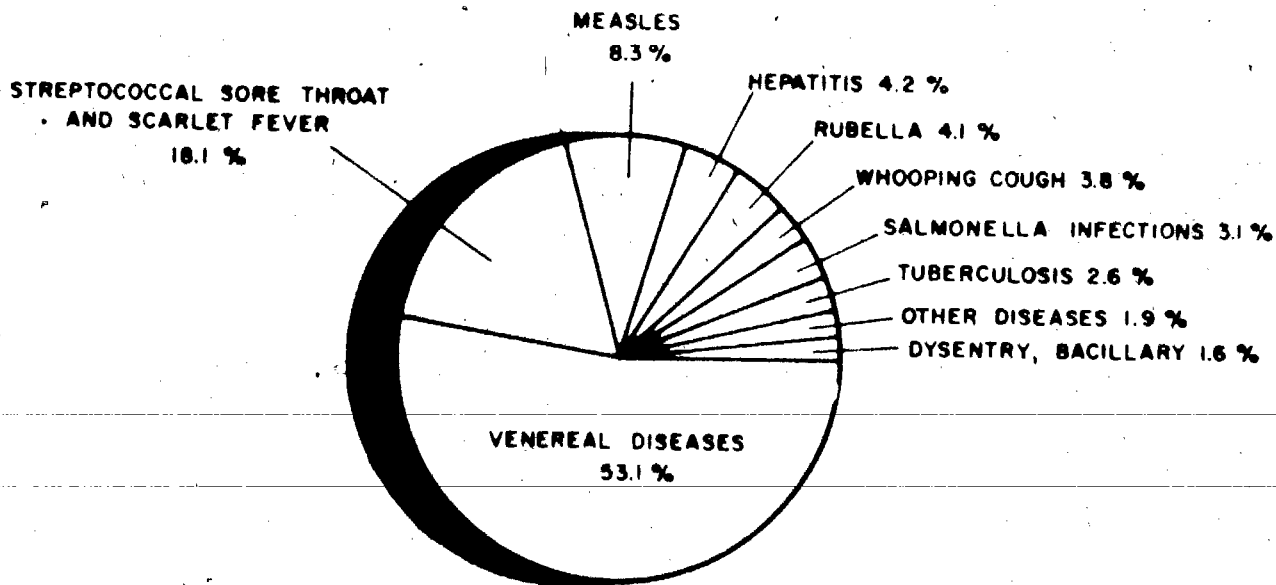
**NOTIFIABLE DISEASES**

**CANADA 1975**

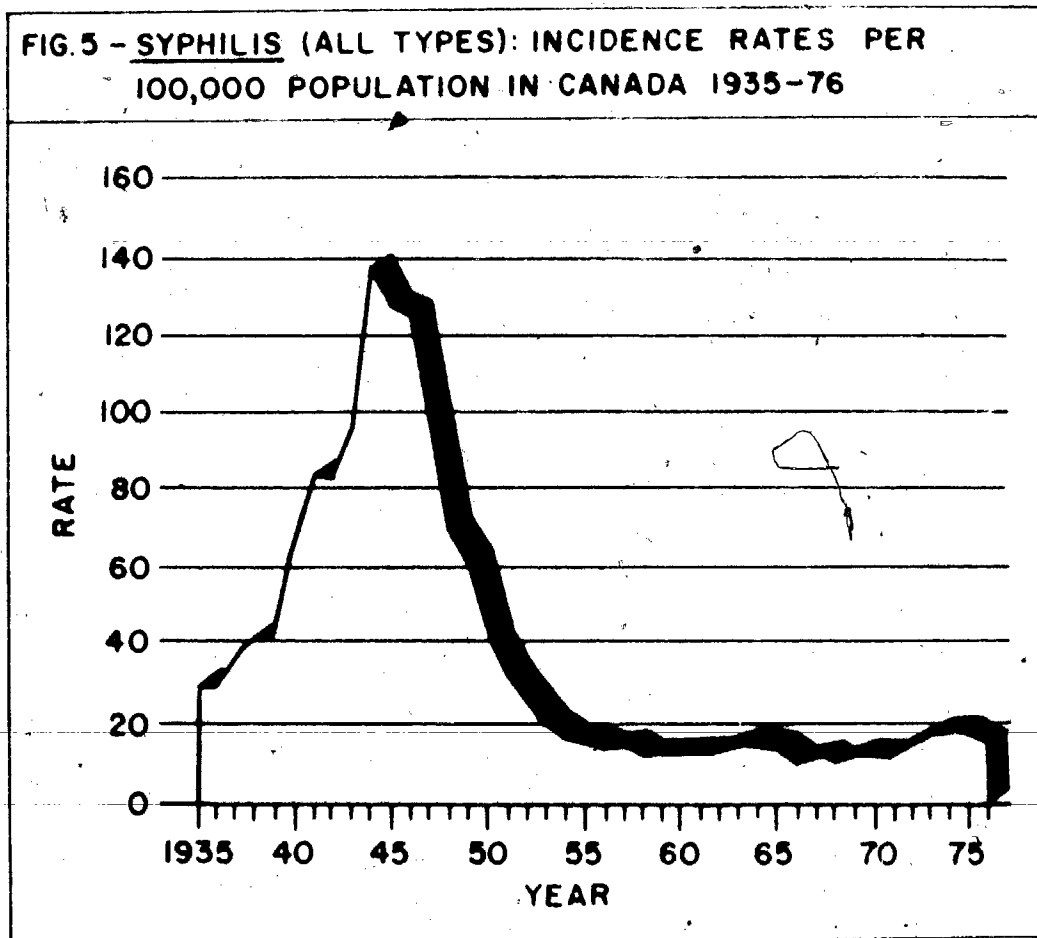
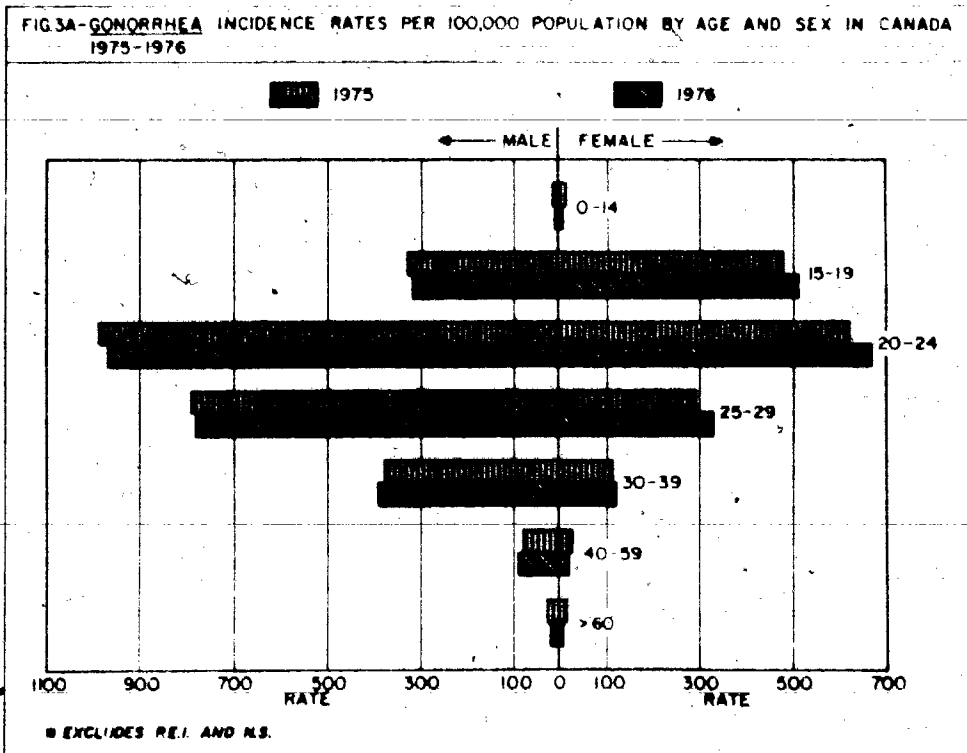


**NOTIFIABLE DISEASES**

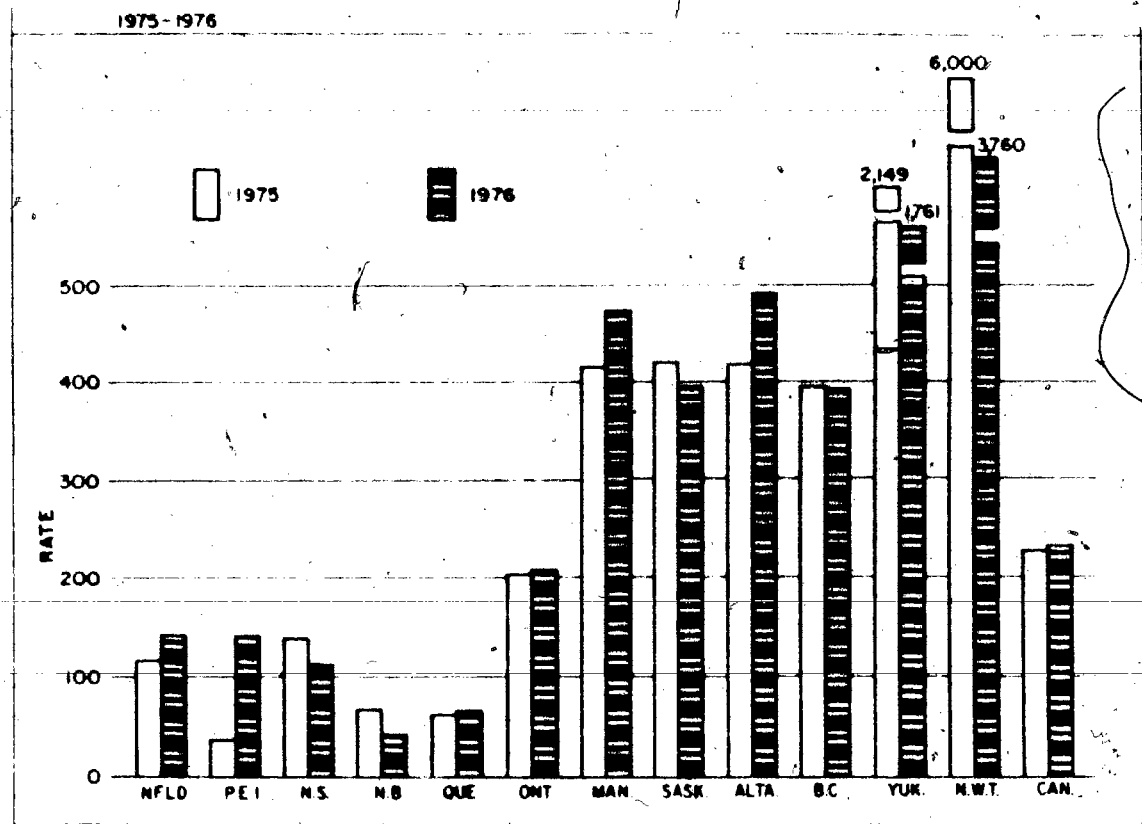
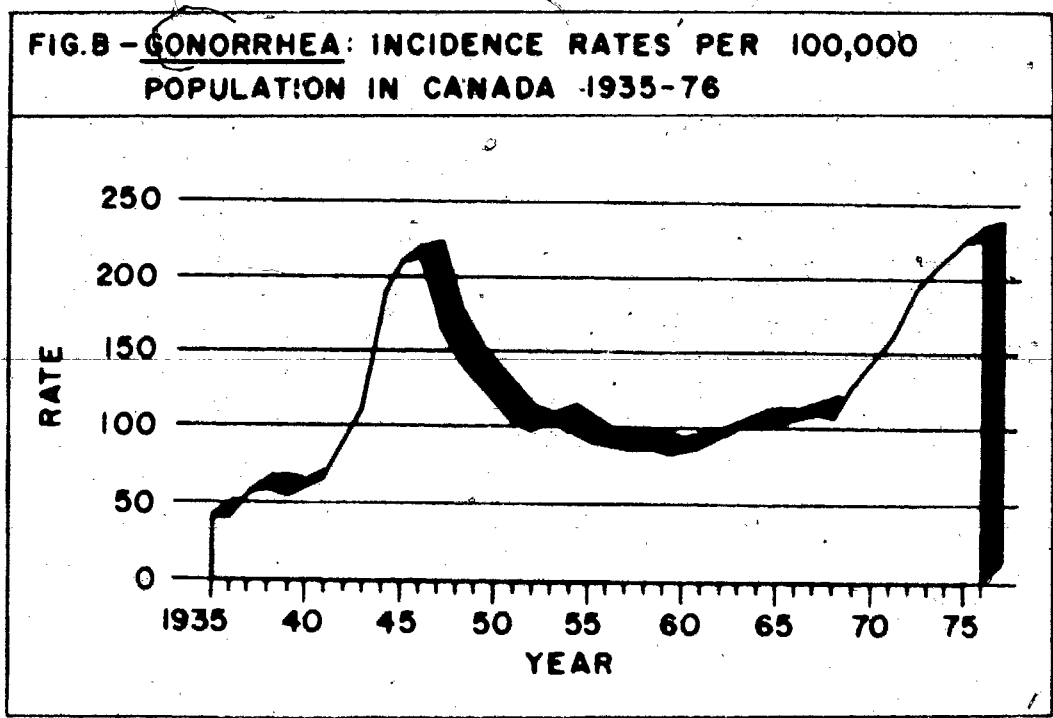
**CANADA 1976**



(source: National Health and Welfare. Sexually Transmitted Diseases Canada, 1976)

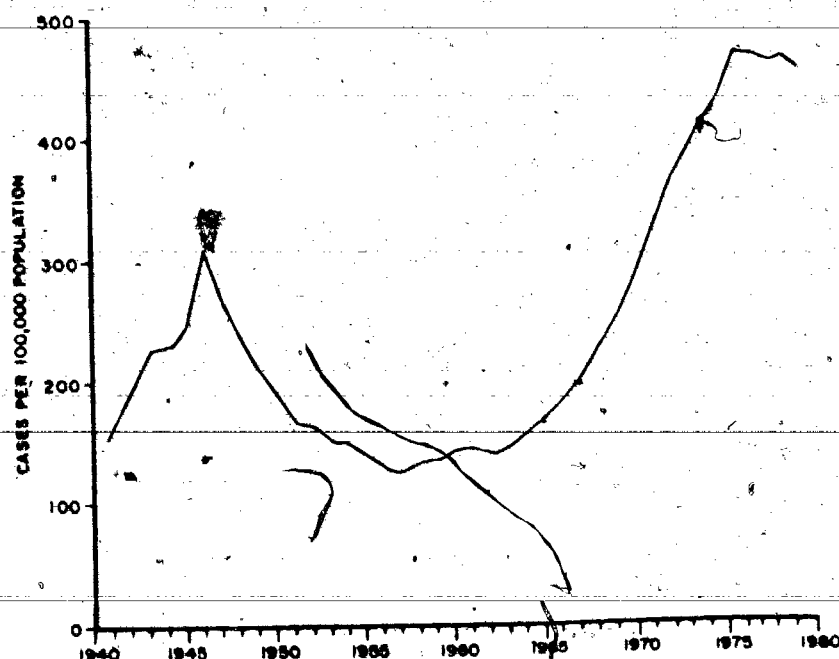


(source: National Health and Welfare, Sexually Transmitted Diseases Canada, 1976.)



(source: National Health and Welfare, Sexually Transmitted Diseases Canada, 1976.)

GONORRHEA - Reported civilian case rates by year, United States, 1941-1979

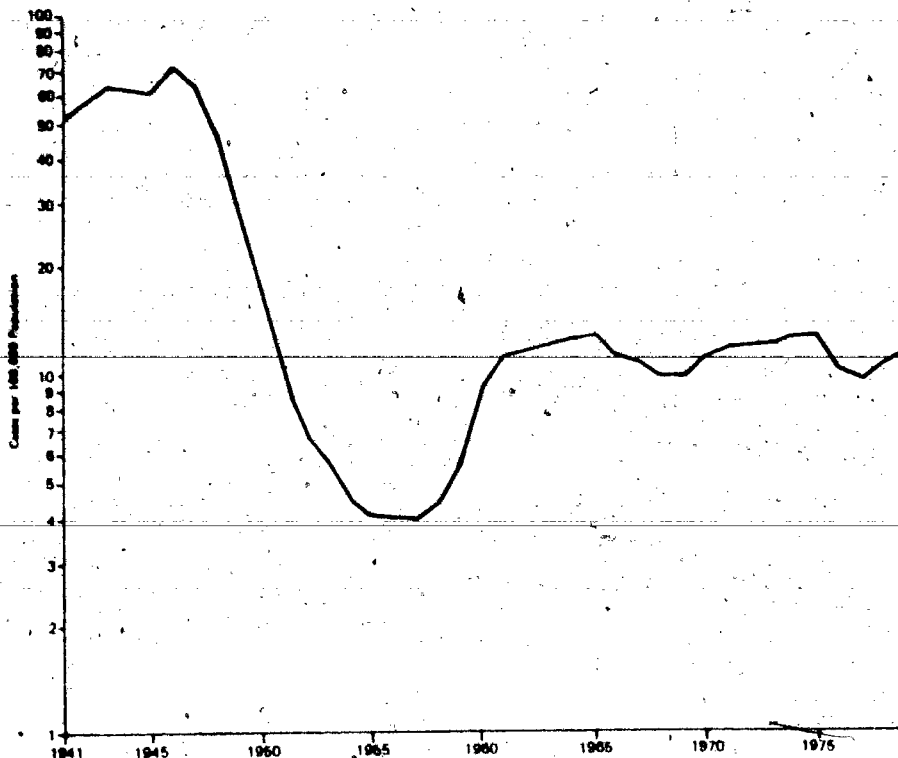


GONORRHEA - Reported cases in civilians and cases per 100,000 population by age and sex, United States, 1978 and 1979

Age Group	Male			
	1978		1979	
	Cases	Rate	Cases	Rate
0-14	2,889	11.1	2,932	11.4
15-19	101,701	977.6	98,158	956.6
20-24	229,829	2408.9	223,842	2308.9
25-29	141,940	1848.0	140,306	1591.5
30-39	91,365	660.7	94,948	657.4
40-49	21,487	186.3	21,326	194.4
50+	8,448	33.5	8,452	33.0
Total	667,639	671.8	660,783	559.9
Age Group	Female			
	1978		1979	
	Cases	Rate	Cases	Rate
0-14	9,069	36.5	9,256	37.7
15-19	153,227	1481.7	150,729	1468.8
20-24	158,155	1568.7	156,608	1532.2
25-29	60,434	669.3	60,968	660.8
30-39	27,995	190.7	28,744	187.8
40-49	4,946	42.6	4,877	41.9
50+	1,971	6.3	2,013	6.3
Total	418,797	371.5	413,195	365.7
Age Group	Total			
	1978		1979	
	Cases	Rate	Cases	Rate
0-14	11,958	23.5	12,188	24.3
15-19	254,928	1278.9	249,887	1211.4
20-24	387,984	1977.6	380,250	1910.0
25-29	202,374	1147.0	201,273	1115.5
30-39	119,360	418.7	123,692	415.8
40-49	26,413	111.4	26,203	115.8
50+	10,419	38.4	10,465	18.3
Total	1,013,436	468.3	1,003,958	459.4

(source: U.S. Center for Disease Control, Annual Summary 1979)

**SYPHILIS (Primary and secondary) - Reported civilian case rates by year, United States, 1941-1979\***



\*1941-1946 Fiscal Years: Twelve-month period ending June 30 of year specified.  
1947-1979 Calendar Years.

**SYPHILIS - Reported cases in civilians and cases per 100,000 population by age and sex, United States, 1978 and 1979**

**Primary and Secondary**

Age Group	Male				Female				Total			
	1978		1979		1978		1979		1978		1979	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
0-14	68	0.2	36	0.2	86	0.4	115	0.5	154	0.3	154	0.3
15-19	1,716	16.5	1,865	18.0	1,316	12.7	1,478	14.4	3,032	14.8	3,344	16.2
20-24	4,388	45.0	5,241	54.1	1,688	16.4	1,778	17.4	6,044	30.8	7,019	35.3
25-29	4,037	48.9	4,651	52.8	1,088	12.0	1,043	11.3	5,125	29.0	5,694	31.6
30-39	4,043	29.2	4,863	33.7	836	5.7	892	5.8	4,879	17.1	5,755	19.3
40-49	1,504	13.8	1,771	16.1	242	2.1	273	2.3	1,746	7.7	2,044	9.0
50+	579	2.3	751	2.9	97	0.3	113	0.4	676	1.2	864	1.5
<b>Total</b>	<b>18,325</b>	<b>15.6</b>	<b>19,182</b>	<b>16.2</b>	<b>5,321</b>	<b>4.8</b>	<b>5,662</b>	<b>5.0</b>	<b>21,656</b>	<b>10.0</b>	<b>24,574</b>	<b>11.4</b>

**Congenital**

Age Group	Number of Cases		Percent of Total	
	1978	1979	1978	1979
<1	107	130	24.6	39.3
1-4	23	27	5.3	8.2
5-9	15	5	3.5	1.5
10+	299	169	68.6	51.0
<b>Total</b>	<b>434</b>	<b>331</b>	<b>100.0</b>	<b>100.0</b>

(source: U.S. Center for Disease Control. Annual Summary 1979)

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