Partner Notification in North America – A historical account

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Partner notification is the practice of identifying and contacting sexual partners of infected individuals to inform them of their risks of exposure, refer them for testing and treatment when appropriate, and often to provide education to help prevent further exposure and transmission.[1-3]

PN is also called **contact tracing** or **partner services**, although those terms are normally reserved for activities undertaken by public health officials. A variety of agents, including infected individuals themselves, may carry out PN.

Introduction

In North America, partner notification (PN) has been an integral part of public health methods for the control and prevention of sexually transmitted infections (STI) since the 1940s, and has roots in 19th-century practices. Initially proposed for syphilis control, it now extends to a wide range of STIs, including HIV.

As part of a larger project coordinated by the National Collaborating Centre for Infectious Diseases (NCCID), this review documents the origins of PN in North America, the adoption of new methods, and strategies introduced to enhance practice. A historical vantage point helps assess factors that contribute to success and principles for good practice, as well as the remaining challenges.

Methods

A mixed-methods approach was adopted to identify published and unpublished source materials focused on the early history of partner notification or contact tracing in Canada and the United States. Source materials included primary research, systematic reviews, commentaries, reports, policy documents, and guidelines.

Search methods covered the PubMed database, reference lists of the articles retrieved, a manual search of selected journals, key public health organization websites, and a review of documents identified from semi-structured interviews with STI program experts and an online discussion forum (stdpreventiononline.org).

Key Innovations

Lot system

The lot system—an epidemiological tool linking cases and contacts—helped to quantify individuals' contributions to disease transmission, and to set priorities.[17]

Reinterviewing

Reinterviewing elicited new contact names not divulged at the first interview, as well as more accurate contact information for partners.[20]

Behaviour modification approach to interviews

The CDC modified its interviewing process to focus on five messages to infected individuals. Interviewers stressed the importance of adhering to treatment, returning for follow-up testing, assuring that sex partners be examined, avoiding exposure to reinfection, and recognizing and responding to symptoms.[15]

Patients refer their partners

The responsibility for notifying partners shifted to patients, as studies found little difference in the numbers brought to treatment when trained investigators and the patient-referral system were compared.[21]

Developments in partner notification policy and practice

This timeline highlights the work of particular innovators, the evolution of practice by jurisdiction, and shifting policies and responsibility for PN services. It also reflects shifting disease trends and social factors.

1865, Quebec, Canada
An act allowed for ***judge-ordered*** identification, examination, and treatment of sexual partners of infected military personnel—***with or without consent***.[4]

Early military approaches to syphilis control were hampered by false reports.[5,6]

1917, Dr. Samuel Grubbs
In Newport, USA, a Red Cross funded VD control system included screening tests, contact tracing, and ***isolation of identified contacts*** (mostly 'prostitutes').[8]

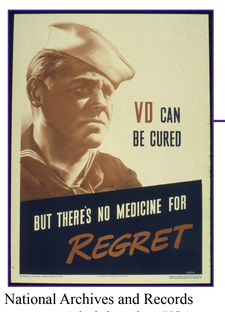
Post-WWI
Syphilis morbidity and mortality increased steadily.

Post-WWI
Several Canadian provinces legislated the creation of ***dedicated VD clinics*** and gave local health authorities responsibility for case-finding and contact tracing.[5]

Contact tracing grew more effective with cooperation between US military and UK civilian health services.[7,9]

1940s A new era of ***'contact epidemiology'*** sparked needs for ***standard protocols*** and ***specially trained personnel***.[2]

Investigators aimed to trace contacts to the beginning of incubation periods and to identify all sexual contacts.[1,7,11]



National Archives and Records Administration, USA

WWII *– Again, war increased rates of STIs.*
Quebec, Canada introduced ***mandatory case-reporting of VD***, special clinics in hospitals, and contact tracing for all reported cases.[13]

Mid-1940s
In ***Ontario***, Canada, the new public health ***nurse-epidemiologists*** replaced the ***social service nurse***.[5] Nurses performed social service visits and checked treatment adherence but their low numbers limited their reach.[14] ***Quebec*** rejected such social service aspects in favour of ***patient confidentiality***.[14]

Trials of ***home visits*** were ***unsuccessful*** in reaching contacts.[17]

Trends shifted from ***form letters, telephone and telegraph*** *to* ...

…more recently, the use of ***internet and social media***.

1969 – 1976
More men naming ***male and anonymous partners*** led to screening in ***bathhouses, bars, and sex clubs***.[6]

Time and costs involved in PN have favoured a shift to ***referral by health care providers and patients***.

Early 1900s, Dr. Michael M. Davis
His Boston VD clinic offered ***low-cost treatment*** and ***used social workers*** to locate and treat recently infected individuals.[7]

1920, New Jersey, USA
The health department **employed nurses** to persuade patients to disclose names of sexual contacts for medical follow-up.[8]

1936, Dr. Thomas Parran, Surgeon-General, USA
- Introduced a ***comprehensive, uniform program*** in response to syphilis
- Included case finding, prompt treatment, contact tracing, and health education[7]
- In 1938, Parran secured funding for local VD control programs and ***rapid treatment centres***,[1,7,9,10] which enabled early and more completed treatment, ***reducing incident cases***.[2]

PN tasks had fallen to social workers, nurses, or physicians. But a new cadre of professionals emerged.

In the US, these were ***VD investigators*** or ***epidemiologists***, and later, the CDC's ***'disease investigation specialists' (DIS)***.[8,12]

In Canada, the PN role commonly fell to public health nurses, seconded to the role as needs arose.

In Quebec, specialized teams in Sanitary Units conducted case finding through ***antenatal, premarital and pre-employment screening***.[13]

In the 1950s, the USA piloted ***'speed zone epidemiology'***. This intensified gonorrhea program failed, hampered by limited funds and poor diagnostics.[6,15]

In 1964, with improved diagnostics, a new US gonorrhea program was launched. It ran in three phases:

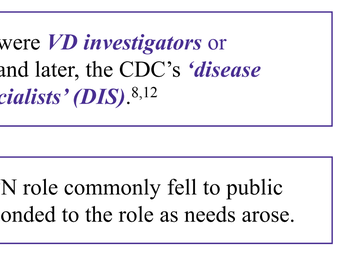
1972 Emphasized screening ***asymptomatic infected women***, seen as a disease reservoir, and gave less attention to interviews[15]

1975 Overwhelmed by high incidence of gonorrhea, targeted ***'core transmitters'*** with multiple sex partners; quantity of interviews favoured over quality[15]

1979 Focused on identifying ***asymptomatic women and men***[6] to prevent ***pelvic inflammatory disease***; expanded interviewing[16] and tested for reinfection and antibiotic resistance.

Interview processes were refined and protocols and epidemiological forms established; ***data gathering*** was more detailed, centralized and correlated across sectors.[17]

Contact tracing was expanded further, from index case to a wider socio-sexual network of ***'suspects'*** and ***'associates'*** although a smaller yield of cases was noted.[11,18,19]



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Several indices were developed to evaluate efficiency of methods, including the contact index, epidemiological index, brought-to-treatment index, and the person-to-person index.[17]

Principles for Success

- Integrating PN within a larger public health initiative
- Continuous monitoring and evaluation of PN processes
- Ensuring patient confidentiality (i.e. the name of an index case is not divulged to contacts)
- Providing free testing and treatment

Challenges

- PN effectiveness is difficult to measure because it is most often delivered with a series of interventions (e.g. health education, routine screening, rapid treatment).
- Initially, venereal disease control targeted syphilis and gonorrhea, but other STIs—including chlamydia, non-gonococcal urethritis, and HIV—put further strain on already limited resources.[21]
- Restricted budgets, high rates of mobility, and increasing numbers of anonymous partners may call for new models of practice (e.g. use of social media).

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