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MIDDLESEX-LONDON HEALTH UNIT STI CLINIC REVIEW
STI CLINIC REVIEW – Sept-Dec 2014

BACKGROUND

- Middlesex-London Health Unit (MLHU) contracted Epirus Consulting to complete a review of clinic organization and operations for its sexually transmitted infection (STI) clinic.

- Three of the physicians and MLHU staff, including the clinic manager, nurses, and administrative personnel who work in the clinic, were interviewed. Additional input was gathered from key informants from other public health units (PHUs). The physicians who work with MLHU staff at the STI clinic are not MLHU employees. One of the physicians has been named Medical Director. No compensation is attached to this role. Appendix A summarizes the input received from the physicians and MLHU staff working in and managing the STI clinic.

- The consultant reviewed a sample of 53 client charts from the 1990s through 2014 randomly selected by a non-clinic administrative assistant, with a view to assessing demographic features of clinic clients, reasons for visits, and clinical quality. Appendix B summarizes the findings of the chart review.

- Based on conversations with key informants during the course of the review, physician reimbursement for clinical services arose as a potential risk issue. Appendix C summarizes relevant background on this issue.

- Under the Ontario Public Health Standards (OPHS), each PHU provides STI clinic services as part of its efforts to improve the health of the population it serves. Comparator PHUs were approached to provide data on what was defined as the ‘epidemiologic yield’ of clinic services, i.e. what proportion of reportable STIs are diagnosed at STI clinics. Appendix D summarizes these findings.

KEY FINDINGS

- MLHU's STI clinic sees significant numbers of clients during its 6 weekly hours of operation. Operationally, it is a well-functioning, focused clinic, providing a limited range of services, delivered efficiently, and with reportedly high patient/client satisfaction.

- Providers (both physicians and MLHU staff) report high degrees of provider satisfaction, noting that increased space would be welcome. Medical directives are felt to be comprehensive and to cover the services provided to clinic clients. No risk concerns were identified by providers.

- Due to the small number of people seen for treatment of documented STIs, it was not possible to ascertain the degree to which treatment provided to persons diagnosed with STIs is consistent with treatment guidelines and/or recommendations of Health Canada or the Ministry of Health and Long-Term Care (MOHLTC). In the charts provided for the chart review, care provided met current practice guidelines. Documentation, while brief, appears succinct and adequate. Treatments noted to be prescribed are appropriate for the conditions being diagnosed.

- The quasi-contractor relationship between MLHU and the physicians working in the clinic appears to be mutually beneficial when viewed in operational terms. Physicians working in the STI clinic draw blood from patients, sparing MLHU the cost of hiring or contracting a venipuncture technician to do this work. At this time, MLHU charges no overhead and the physicians manage their own billing, submitting claims directly to the provincial payer under the STI clinic billing number.

- The STI clinic had played an important role for health care professional trainees including medical students and residents (physicians completing their post-medical school, pre-licensure training). At the time of the review, trainees were reported to be not regularly present in the STI clinic.

RECOMMENDATIONS

1. MLHU's STI clinic model is efficient. Compared to other PHUs, MLHU's clinic yields a higher proportion of diagnosed cases of reportable STIs, and it is recommended that this model continue. Further analyses to determine whether there are any unmet needs and/or it would be beneficial to expand clinic hours of operation and/or offer STI clinic services in other locations could be considered.

2. The management of clinic client files and reportable disease case files, as described by staff, may include substantial rework and duplication. A review of the overall workflow for these two distinct but related processes

is recommended to ensure that human resources are not misallocated to duplicative work.

3. Client satisfaction data were provided to the consultant from a one-time survey in 2011. Consistent with an increasing client/patient focus across the health sector, ongoing client satisfaction surveys, including consideration of involving clients in prioritizing quality improvement efforts in the STI clinic, are recommended.

4. The STI clinic can provide important training opportunities for health care professional trainees. If this opportunity is still deemed desirable by MLHU, regularizing the documentation and supervision process for trainees with their educational institutions would be recommended as a joint effort of MLHU and the institutions where trainees are formally enrolled. A simple documentation checklist for trainees and HU-issued ID cards with photographs for all staff, whether MLHU employees, contracted physicians, or trainees, are recommended.

5. As a matter of prudent risk management, review of the existing contract documentation with physicians working in the clinic and review to ensure that MLHU has copies of relevant licensure and malpractice insurance documentation for all contracted physicians are recommended. Physicians should be expected to update this documentation annually by the MLHU as a condition of continuing work in the STI clinic. Explicit documented responsibilities for the medical director managing the physician workforce are needed. Options for the Medical Director role would be i) include this within the responsibilities of the MOH or AMOH or ii) contract with an outside physician to perform this role.

6. The custom that liabilities arising from physician billing practices do not generate vicarious liability for hospitals or other settings where non-employed physicians practice may not apply to STI Clinics operated by PHU in light of the designation of STI clinics by the MOHLTC and the associated assignment of a specific STI clinic billing number to the PHU clinic by the Ontario Health Insurance Program (OHIP). Therefore, it is recommended that MLHU examine clinic billing practices to ensure alignment with MOHLTC guidelines.

7. PHUs provide a range of services in to meet the requirements of the OPHS. Reflecting the range of communities and needs in Ontario, the OPHS are largely silent on the operational aspects of these services. Given MLHU's relatively large size and prominence in Ontario, coupled with its STI clinic's operational efficiency, consideration of an operational workshop to bring together staff from STI clinics in different PHUs to exchange learnings and support innovation is recommended.

ACKNOWLEDGMENTS

I would like to thank MLHU staff and the physicians who work in the STI clinic for their assistance, input and enthusiasm for the work they do. Colleagues in comparator health units and organizations also gave freely of their time and provided valuable insights.

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APPENDIX A: Summary of MLHU Staff & Physician Interviews

The program manager for the STI clinic provided an overview of the service organization as follows:

- Clinics run M 1700-1900, W 1700-1900, F 0800-1000 in clinic space within the MLHU premises. Four public health nurses (PHNs) and four clinical team assistants (CTAs) work at the Monday and Friday clinics and this increases to 5 of each for the Wednesday clinic. PHN standard work includes one evening per week to provide staffing for the clinic

- A client satisfaction survey was completed in 2011 and reported high levels of satisfaction overall; concerns about feeling rushed at Wednesday clinics led to the decision to increase PHN/CTA staffing at that clinic; confidentiality was enhanced by using 'butcher number' system rather than calling out names

- Left without being seen (LWBS) rate is used as a key metric to identify opportunities for improvement; clients can make complaints via a phone number on a business card provided to them

- Medical directives are in place for testing and treatment enabling nurses to work with physician supervision. Currently, however, nurses do not work under medical directives when doctors are present in the clinic.

The three physicians currently working in the MLHU STI clinic were interviewed individually by the consultant using a standard template (questions below). All are specialists in Medical Microbiology and their comments are summarized below.

- All expressed a high level of satisfaction, describing the clinic as busy, satisfying work that involves client contact and good collegial working relationships with PHNs and CTAs

- All described an efficient STI clinic model with 6 examination rooms, physicians doing microscopy and venipuncture, providing medication for STIs, treatment for warts (liquid nitrogen), and referring HIV and HCV care to other providers

- When asked about the value of electronic health records (EHR), physicians agreed that the amount of typing would likely slow the clinical workflow with no identifiable gains for clients or for efficiency

- When asked about present and future needs, physician respondents identified the need for a female physician to address the preferences of

some clients for a female MD and more physical space. When asked about risk concerns, physician respondents did not identify any risk concerns

Three PHNs and one CTA selected by MLHU staff participated in a group interview. They described clinical workflows and their experiences working in the STI clinic.

- PHNs and CTAs are adequate for workload; PHNs work two clinics per week; CTAs are assigned to specific tasks (e.g. registration, lab) for each clinic

- All appointments are walk-in; clients prefer this and walk-in appointments avoid suggestion of repercussions if appointment missed. Workflow is sequential: registration (CTA) to PHN to MD; 5-10% revisit PHN after MD, otherwise clients are discharged by MD

- Point-of-care results (i.e., microscopy) highly valued by clients; technology (EHR) would slow care delivery down and not yield any benefits

- Improvement efforts are ongoing; as an example, LWBS data were analyzed to distinguish between LWBS and 'pulled in error' (client takes two numbers); monthly scorecard exists but not looked at by PHNs

- No gaps in medical directives identified; recently developed one for treatment to enable PHNs to dispense meds outside clinic hours (10 to a - few dozen cases per year); PAP smears requiring follow-up referred for colposcopy, and those interviewed stated this process works well and there are no concerns

- Room restocking with consumable supplies done by CTA in advance of every clinic day from in-clinic stock; basement inventory used to replenish clinic stock outside operational hours

- Positive test results reviewed at noon daily (Monday-Friday) and clients then called; PHN pulls charts for 'positives' to verify if clients need to be called back for treatment (most noted to be already treated); PHN documents positive results and follow-up plan, if any, in client chart

- Duplicate lab result goes to reportable disease 'section' where same PHN manages results; working notes with reportable disease copy provide additional details regarding contacts and efforts to reach them

- Weekly quality assurance review by CTA to pull any pending results greater than seven days to determine why no results yet available

- At end of clinic, each client record in Hampson clinic Service software is updated (staff report this software is not performing as expected); CTA creates record at registration and updates it regarding tests ordered/sent; software has HL7 (a standard format for exchanging confidential health information) inbound message capability but Public Health Laboratory cannot send results in HL7 format so no meaningful information exchange at this time; all records updated manually

QUESTIONS FOR PHYSICIAN INTERVIEWS

1. Please describe how the STI clinic is organized from your perspective as a physician and your concerns, if any.

2. How many patients would you see in a usual clinic? How are patient charts and billing managed?

3. What if any risk concerns would you identify based on your experience in the STI clinic?

4. Do you identify any current or future needs? If yes, please describe.

5. From your perspective, what would be the advantages and disadvantages of electronic health records in the STI clinic?

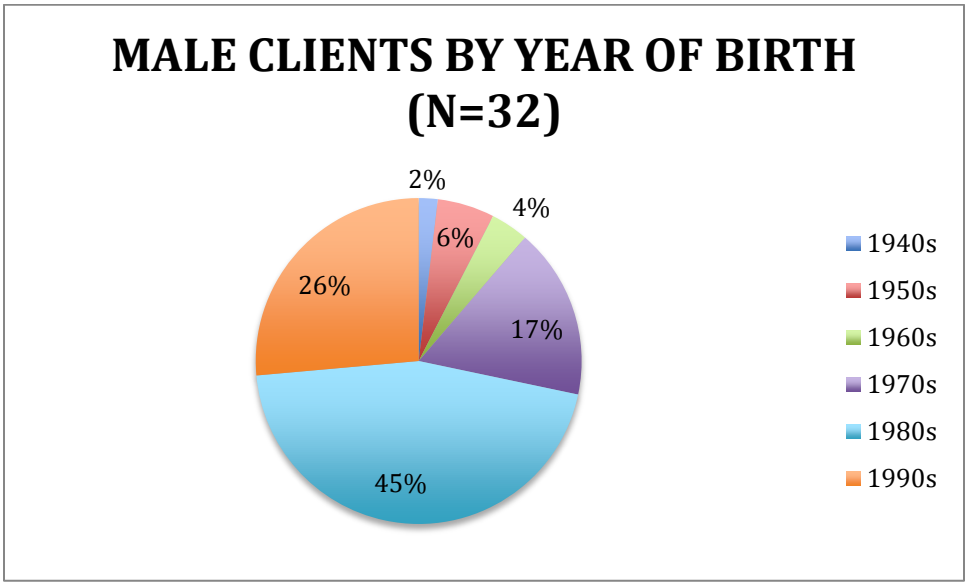
APPENDIX B: Summary of STI Clinic Chart Review

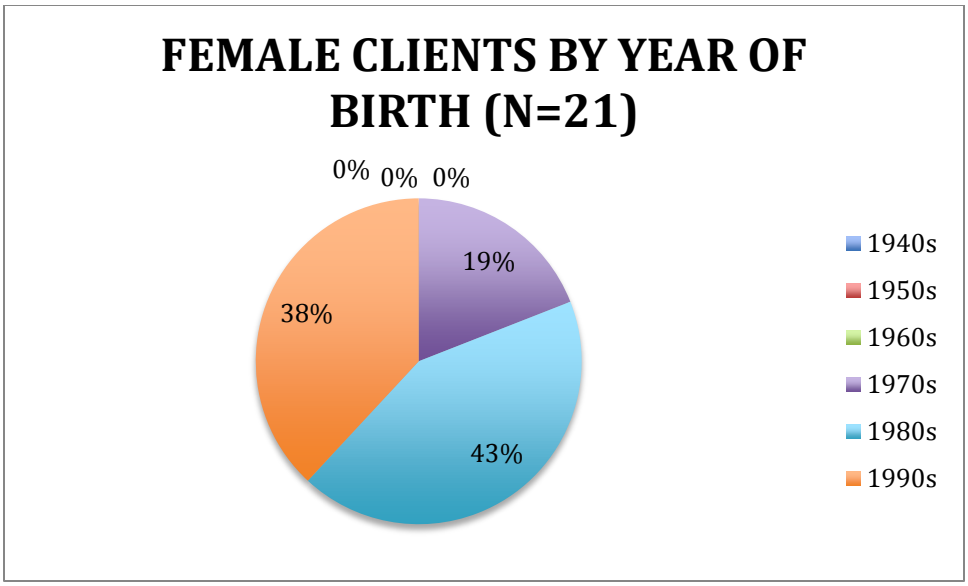
Background

Clinic staff provided a sample of 53 client charts for review by the consultant. Some charts contained records of multiple visits by the client, while others contained records for a single visit. The data abstracted from the charts contained no personal health information or identifiers beyond age and gender. The chart review findings are summarized in the following sections: demographics, reasons for visit, clinical quality and summary with recommendations.

Demographics

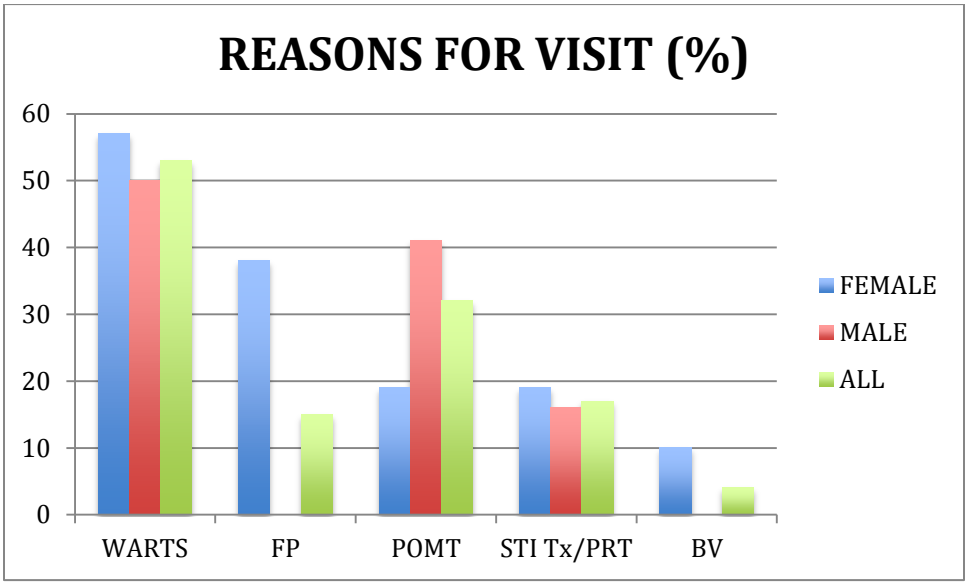
Among 53 client charts, 32 were for male clients and 21 for female clients. Because the charts were drawn from a period of several years of clinic operations, the results below report the proportion of clients born in each decade, by gender. Overall, the male clients tend to be somewhat older than female clients in this sample of charts.





Reasons for Visit

Clients may have more than one reason for visit (e.g. piece-of-mind testing and concern regarding warts or desire for family planning). Reasons for visit were different for male and female clients and the figures below provide reasons for visit by gender. Because clients may have more than one reason for visit, totals are greater than 100% (FP: family planning, POMT: piece-of-mind testing, STI Tx/PRT: STI treatment or partners seeking testing/treatment, BV: bacterial vaginosis)



Clinical Quality

All 53 client charts reviewed contained a combination of handwritten clinical notes and standard forms. Due to the small number of people seen for treatment of documented STIs, it was not possible to ascertain the degree to which treatment provided to persons diagnosed with STIs is consistent with clinical practice guidelines and/or recommendations of Health Canada or the Ministry of Health and Long-Term Care (MOHLTC).

Nevertheless, charts in this sample consistently documented presumptive treatment for possible STIs consistent with federal guidelines regarding syndromic treatment.[1] Where patients consent to testing, appropriate samples are sent. Given the relatively higher prevalence of STIs among clinic attendees as compared to the MLHU population, this strategy appears to strike a reasonable balance between resource use and disease control – persons who subsequently test negative are unlikely to experience adverse effects from a single dose of antibiotics for STI treatment and prompt treatment of persons who subsequently test positive reduces resource use associated with followup and more effectively reduces the risks of onward transmission than a test-and-call-back-for-treatment strategy.

On the matter of physical examinations, current clinical guidelines may create conundrums for front-line providers. The Health Canada STI guidelines[2] state

> Effective prevention and management of STIs requires the following elements on the part of the health care practitioner:
>
> 1. Assessing the reason for a consultation.
> 2. Knowing about STI risk factors and epidemiology.
> 3. Performing a brief patient history and STI risk assessment.
> 4. Providing patient-centred education and counselling.
> 5. Performing a physical examination.
> 6. Selecting appropriate screening/testing.
> 7. Diagnosing by syndrome or by organism and post-test counselling.
> 8. Treating.
> 9. Reporting to public health and partner notification.
> 10. Managing co-morbidity and associated risks.
> 11. Following up.

Notably, this guideline does not admit the possibility that physical examination may not be indicated for some clients or may be declined by some clients. STI practice, as with any practice, involves important elements of judgment and absolute respect for legal and ethical codes that ensure patients are not subject

[1] http://www.phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/section-2-eng.php#a7
[2] http://www.phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/section-2-eng.php#a5

to examinations of no benefit or against their will, except in narrowly-defined exceptional circumstances.

Ontario's Public Health Standards covering STI[3] and accompanying protocols[4] are silent on the matter of physical examination, perhaps recognizing that general professional standards that providers complete relevant physical examinations may suffice.

Given the reasons for visit in the chart sample, each chart was reviewed to identify what if any physical examination was documented. Documentation may be in narrative form or a sketch of the affected area. These findings are summarized below:

Reason for Visit	Number of Clients	Documentation Review
Warts	28	26 of 28 with documented exams; in one case valtrex prescribed and no exam documented (appears patient may have described recurrence of previously diagnosed genital herpes), in one case, chart coded as HSV concern and no exam or treatment documented
Family Planning	8	Exams documented, where STI (3/3), wart (4/4), or BV (2/2) concerns present
Piece-of-Mind Testing	17	Patients by definition asymptomatic; exams documented where other concerns present
STI Treatment/Partner	9	1 case of syphilis treatment of contact of case: no exam documented 1 case of syphilis treatment; no exam documented 1 partner of chlamydia case; no exam documented
Bacterial Vaginosis	2	2 of 2 noted exam & wet prep done

In several charts, documentation of referral for conditions outside the scope of the STI clinic in the form of referral letters was noted. For any focused clinic model, a process must be in place to connect clients with care they require that is outside the 'focus' and the chart sample indicated this was done for clients with liver disease and for women requiring colposcopy consultation.

[3] http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/ophs_2008.pdf

[4] http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/sexual_health_sti.pdf

Summary & Recommendations

- Due to the small number of people seen for treatment of documented STIs, it was not possible to ascertain the degree to which treatment provided to persons diagnosed with STIs is consistent with treatment guidelines and/or recommendations of Health Canada or the Ministry of Health and Long-Term Care. In the 53 client files reviewed, however, the care provided was consistent with current clinical practices and included appropriately documented physical examinations of clients where warranted.

- Charts contained inconsistent documentation of clients' sexual partner and practice preferences. This may be relevant for some clients in equipping them to reduce risks associated with sex. Consideration of a standardized, patient-completed sexual preference and practice form that would become part of the client chart may be warranted

- In the absence of a cumulative patient profile (CPP) or electronic health record, it was difficult to determine from client charts whether a client had had repeated visits for reportable STIs or whether repeated visits were for POMT and/or wart treatment. Clinic staff may, by liaising with surveillance and reportable disease staff, have other means by which to ascertain this so it is recommended that this be clarified, given the degree to which repeated reportable STIs in the same client may be understood as a 'treatment failure' attributable to public health's efforts.

APPENDIX C: Physician Reimbursement Considerations

Background

In the course of interviews with key informants, several posed questions about how physicians working in the MLHU STI Clinic are compensated. Discussions with MOHs from other health units provided additional insights about how this is managed in similar organizations.

Relevant Policy and Information

The Ontario Public Health Standards[5] state:

> The board of health shall provide clinical services for priority populations to address contraception, comprehensive pregnancy counseling, sexually transmitted infections, and blood-borne infections. For further information, refer to the Sexual Health Clinic Services Manual, 2002 (or as current).

The Sexual Health Clinic Services Manual, 2002 is not available online. MOHLTC staff kindly provided a copy of the manual and the section regarding physician payment is excerpted below:

5.3 Physician Reimbursement and OHIP Billing

- Designated STD Clinics:
  Many health units have clinics that are specifically designated by OHIP as STD clinics. These clinics have an OHIP STD Clinic billing number that allows the health unit to submit claims directly to OHIP for physician services. Physicians working within this setting receive a salary from the health unit based on an hourly rate or from revenues generated from the OHIP billings.

- Sexual Health Clinic (Birth Control):
  Clinics that provide only birth control services do not have designated OHIP billing numbers. Physicians working in this setting are reimbursed for services either on a fee-for-service basis (clinic physicians bill OHIP for their services) or directly from the health unit based on an agreed upon hourly rate. If the physician is reimbursed on a fee-for-service basis the client must provide an OHIP number. However, health units must also build into their budget the cost of providing services to clients without an OHIP number.

  Many health units have Public Health Nurses (PHN) who work in the clinical setting under medical directives, while other health units have hired Registered Nurses with Extended Class (RN (EC)) preparation as Nurse Practitioners (NP). Neither the PHN nor the NP can bill OHIP for the provision of services.

- Integrated Clinics
  Many health units have integrated their birth control and STD clinic services. For those clinics that have an OHIP STD Clinic billing number, the health unit submits claims directly to OHIP for physician services for those clients who only receive STD related services. For clients receiving mainly birth control services see previous page "Sexual Health Clinic (Birth Control)".

[5] http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/shstibb.aspx (requirement 7)

A draft revision dated 2010 was never finalized but includes the same language as the 2002 version with a change from STD to STI. MLHU staff have confirmed that the STI Clinic is a ‘Designated STD/STI Clinic’ as described above and in the 2010 draft revision.

The OPHS further direct that services at STI clinics be provided to all clients without the need for OHIP numbers or provision of personal information. Clinic management states that OHIP numbers are not collected and that clients may register with any name they choose.

The physicians who work at the MLHU STI clinic state that they currently submit billings to OHIP under the provisions governing designated STI clinics. OHIP submissions are prepared by administrative staff available to the physicians through their other roles as university-affiliated faculty and/or hospital-affiliated medical microbiologists and submitted. The MLHU has neither responsibility for nor visibility into these submissions.

The MOHLTC has indicated that they are planning a consultation and review of physician billing practices in designated STI clinics in 2015.

APPENDIX D: Comparator Health Units

The OPHS identify two high level goals to which the MLHU's STI clinic contributes:

> To prevent or reduce the burden of sexually transmitted infections and blood-borne infections
>
> To promote healthy sexuality

The OPHS leaves operational considerations and arrangements largely to individual health units. To understand better the impact of clinic services on reportable STI incidence, (i.e. what proportion of reportable STIs are first diagnosed in STI clinics such as at MLHU), three comparator public health units (PHUs) were selected: Windsor-Essex, Region of Waterloo, and City of Hamilton. All 3 were requested to provide data on the epidemiologic yield for reportable STIs. Windsor & Hamilton kindly provided data summarized below:

<u>City of Hamilton Public Health Services</u>

Year	Total Number of Cases (Gonorrhoea & Chlamydia)	Cases Diagnosed at PHU STI Clinics	Proportion of all cases diagnosed at PHU STI Clinics (%)
2012	1858	377	20
2013	1672	286	17
Jan 1 - Dec 3, 2014	1524	287	19
Overall	5054	950	19

Data extracted: Dec 3, 2014 from iPHIS.

Windsor-Essex County Health Unit

2014 (Jan 1 – Dec 9, 2014)	Total Number of Cases	Cases Diagnosed at PHU STI Clinics	Proportion of all cases diagnosed at PHU STI Clinics
Gonorrhoea	54	7	13%
Chlamydia	805	102	13%
TOTAL	859	109	13%

Middlesex-London Health Unit

Year	Chlamydia			Gonorrhea		
	Number reported (all reporting sources) (M-L residents)	Number diagnosed at MLHU clinics* (includes M-L & non-M-L residents)	Percent diagnosed at MLHU clinics	Number reported (all reporting sources) (M-L residents)	Number diagnosed at MLHU clinics* (includes M-L & non-M-L residents)	Percent diagnosed at MLHU clinics
2009	1,311	374	28.5	210	89	42.4
2010	1,383	475	34.3	178	54	30.3
2011	1,488	534	35.9	110	49	44.5
2012	1,567	659	42.1	106	29	27.4
2013	1,320	536	40.6	82	31	37.8
2014 (Jan to Jun)	690	296	42.9	29	11	37.9

Observations

- Recognizing that data management differences may affect these results among PHUS, the 'epidemiologic yield' of MLHU's STI clinic (on the order of 40%) is nevertheless substantially higher than that of STI clinics in comparator PHUs (13-20%)

- STI clinic services in the MLHU territory are diagnosing decreasing numbers of gonorrhoea cases, reflecting trends across Ontario, while the volume of chlamydia diagnoses appears to be steady. Given MLHU's relatively stable population and migration patterns and that chlamydia is often asymptomatic in females, expanded testing of at-risk women could be expected to reduce rates over time.