Expedited Partner Therapy for Chlamydia Infections

Dr. Colin Q-T Lee, Medical Director (Acting)

&

Jennifer Pritchard, Nurse Consultant,

Communicable Diseases

November 13, 2012
Outline

Background

• Contact tracing, use of EPT in Ontario, legal context

Methodology for literature review

Review of evidence

• Effectiveness

• Attitudes/perceptions of practitioners and patients

• Cost effectiveness

Proposed updated recommendations

Practice implications

Future directions
Background: Contact Tracing in Ontario

Ontario Public Health Standards, 2008

• Boards of health are required to ensure access to provincially funded drugs for treatment of STIs

• Boards of health are to work with health care professionals to ensure appropriate management of STIs

Sexually Transmitted Infections Prevention and Control Protocol, 2008

• Boards of health should discuss and collaborate with health care providers regarding contact tracing strategies.
Background: Methods of Contact Tracing

• Patient follow up
  • Case is responsible for informing partners of exposure to STI and need for testing and treatment

• Public health follow up
  • Public health unit follows up with contact, inform contact of potential exposure, offer testing and treatment

• Health care provider follow up
  • Health care provider follows up with contact, notify of potential exposure and encourage testing.
Background: Contact Tracing Issues

• Patients could be resistant to notifying partners of exposure
  • Want to remain anonymous
  • Fear of violence
  • Fear of social exclusion/stigma

• Health care provider follow up
  • Contact tracing largely viewed as a public health responsibility
  • Lack of time and staff
  • Unease contacting individuals who are not patients

• Public health unit follow-up
  • Stretched resources to follow up with all contacts
  • Unknown effectiveness of public health follow up vs. other methods.
Background: Expedited Partner Therapy (EPT) in Ontario

- Canadian Guidelines on STIs
  - The current *Canadian Guidelines on Sexually Transmitted Infections* cite evidence on EPT, but do not include specific guidelines on EPT

- Issues:
  - Implementation
    - Packaging
    - Messaging
  - Physician resistance
    - Perceived loss of screening opportunity
    - Perceived increased risk of adverse reaction such as allergy to treatment
    - Missed counseling opportunity.
# Background: Environment Scan of EPT use

<table>
<thead>
<tr>
<th>Country</th>
<th>Use of EPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>- EPT is currently legally permissible in 32 states, potentially allowable in 11 states, and prohibited in 7 states</td>
</tr>
</tbody>
</table>
| Australia | - No legal framework to support EPT  
- Contact follow up responsibility of general practitioner |
| UK      | - NHS does not support EPT due to needed patient registration  
- Studying accelerated partner therapy |
| Canada  | - Not known |
Legal Context in Ontario: College of Physicians of Ontario Policy 2-05 Prescribing Practices as it pertains to EPT

Principles

• Patient’s best interests should be the main concern

Preconditions for Prescribing

• Physician to have a full understanding of the patient’s health status through appropriate medical assessment

Exceptions

• Identified situations whereby physician can consider prescribing outside the established doctor-patient relationship:
  • Treatment for a sexual partner of a patient with a sexually transmitted disease (STD) who, in the physician’s determination, would not otherwise receive treatment and where there is a risk of further transmission of the STD.
    • http://www.cpso.on.ca/policies/policies/default.aspx?ID=1848
Legal context in Ontario

• Physicians’ fear and perceived risk of legal liability has been identified as a barrier to EPT implementation
  • This is related to the perceived risk of adverse/allergic reaction to treatment that physicians using EPT are not able to assess in contacts
  • A search of medical literature, legal documents and grey literature uncovered no record of any legal action taken related to EPT
  • Scans completed by the CDC have the same findings
  • This would not include any civil cases that were settled out of court.
2009 PIDAC STI Recommendation

Patient Delivered Partner Therapy (PDPT) aka EPT should be considered as an option for difficult to reach contacts of chlamydia or gonorrhea when usual contact tracing methods are unsuccessful [IA] Evidence is available only from studies of heterosexual men and women

- PDPT must be used with caution in populations at high risk for HIV and syphilis
- Patient information sheets must be included in PDPT
Results from the Recommendations Survey

- Based on utility, 20 health units graded the EPT chapter 3-4/5 with 5 health units grading 5/5; only 3 health units graded less than 3
- Requested Canadian specific evidence – which is not available
- Great resistance for EPT remains
  - Implementation issues
  - Physician resistance
- Requested sample letter
- Updated evidence.
Literature search results analysis

- Search strategy results: 91 articles
  - ≤ 2006 (9)
  - Topic relevance exclusion (12)
- Review of abstracts: 59 articles
  - Articles with focus on Trich (3)
  - Articles for full review: 36 articles
  - Non-research articles (23)
    - Random control trials (2)
    - Cohort (6)
    - Systematic Reviews (3)
    - Qualitative Studies (16)
    - Economic analysis (2)
    - Case controlled study (2)
    - Cross sectional study (3)
    - Non-randomized comparative (1)
    - Audit (1)
  - Note (2)
  - Editorials (5)
  - Letters to the editor (1)
Methods: Literature assessment

• Use of Critical Appraisal Skills Programme (CASP) framework encompassed
  • Cohort studies
  • Qualitative studies
  • Randomized Controlled Trials
  • Systematic Review
  • Economic Evaluations.

http://www.casp-uk.net/
Methods: Literature assessment

Example assessment questions

- Qualitative
  - Was the research design appropriate to address the aims of the research?
  - Has the relationship between researcher and participants been adequately considered?
  - Have ethical issues been taken into consideration?

- RCTs
  - Were participants appropriately allocated to intervention and control groups?
  - Were participants, staff and study personnel ‘blind’ to participants’ study group?
  - Were all of the participants who entered the trial accounted for at its conclusion?
Methods: Literature assessment

Example questions

• Systematic Review
  • Did the reviewers try to identify all relevant studies?
  • Did the reviewers assess the quality of the included studies?
  • Can the results be applied to the local population?

• Cohort Study
  • Was the cohort recruited in an acceptable way?
  • Was the exposure accurately measured to minimize bias?
  • Have the authors identified all important confounding factors? (List the ones you think might be important, that the authors missed.)
  • Have they taken account of the confounding factors in the design and/or analysis?
REVIEW OF THE EVIDENCE
Effectiveness

Number of partners treated

- Systematic review found 4 trials with increased number of partners treated in EPT (RR=1.44, 1.12 – 1.86 Trelle et al., 2007)
- EPT effectiveness compared to inSPOT (web based) and standard contact tracing in MSM was investigated but low study enrollment resulted in cessation of the investigation
- EPT resulted in more treated partners among females with chlamydia (80%) vs. PR (44% P<0.0001; OR = 3.5, 2.1-5.8 Yu et al., 2011).
Effectiveness

Reinfection rate

• Systematic review found EPT reduced risk of chlamydia and/or gonorrhea reinfection (RR= 0.73, 0.57 – 0.93 Trelle et al., 2007)

• EPT does not ↑ or ↓ reinfection rates among female patients with chlamydia compared to standard patient referral (OR=1.6, 0.2 – 13.7 Kerns et al., 2011; RR= 1.07, 0.62 – 1.86 Stephens et al., 2010)

• EPT does not ↑ or ↓ reinfection rates among MSM and MSW compared to non-EPT groups (MSM: 0.98, 0.83-1.16; MSW:1.19, 0.93 – 1.53 Stephens et al., 2010).
## Review of Evidence: Effectiveness

<table>
<thead>
<tr>
<th>Study</th>
<th>Setting and Population</th>
<th>Intervention</th>
<th>Outcome &amp; Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schillinger et al., (2002)</td>
<td>5 US cities N=1787 females (81% followed @ 4 months)</td>
<td>EPT vs. Patient Referral (PR)</td>
<td>Recurrent chlamydia infection, EPT 12% vs. PR 14.9 % @ 4 months post treatment RR 0.80 (CI 0.62-1.05) 85% EPT reporting giving meds to partner</td>
</tr>
<tr>
<td>Cameron et al., (2009)</td>
<td>Edinburgh, N=330 females (65% tested at 12 months)</td>
<td>Postal testing kits (PTK) vs. EPT vs. PR</td>
<td>Recurrent chlamydia infection, PR 10%, PTK 22%, EPT 13% EPT vs. PR OR=1.3 (0.45-3.74) PTK vs. PR OR=2.88 (1.05-7.87) EPT vs. PTK OR=0.46(0.18-1.16)</td>
</tr>
<tr>
<td>Kerani et al., (2011)</td>
<td>King County WA N=75 MSM</td>
<td>EPT vs. inSPOT vs. EPT + inSPOT vs. PR</td>
<td>Low study participation EPT MAY ↑ # partners treated</td>
</tr>
</tbody>
</table>
Effectiveness

- Randomized controlled trial completed at the Public Health Seattle and King County STD Clinic
- Studied females and heterosexual males with gonorrhea and chlamydia in King County, WA (N=1860)
- Intervention: EPT (N=929) vs. standard partner referral (N=931)
- Outcome: Persistent or recurrent chlamydia(CT) and/or gonorrhea(GC) in case between 3 to 19 weeks post treatment
- Persistent CT/GC in 13% cases in standard partner referral
- Persistent CT/GC in 10% cases in EPT
- RR= 0.76(CI 0.59-.98) – EPT reduces rates of GC and or CT reinfection.
Review of the Evidence: Cost Effectiveness
Gift et al., 2011 – King County, WA, USA

• Study based in the USA, private (USA) vs. public system (Canada), free treatment for STI in Ontario vs. USA – less generalizable results

• Assessed the cost of EPT (payer-specific, health care system and societal level) compared to standard partner referral (PR) for treatment of chlamydia or gonorrhea

• From health care system or societal perspective EPT is cost saving: ↑partners treated at ↓ cost compared to PR

• Individual payers (insurance plans) may find EPT to be cost saving depending on # of patient’s partners that receive care from same payer (at least 29% of female’s partners and at least 32-37% of male’s partners)

• Tens of thousands of doses of Azithromycin 1gm have been given out without a report of allergy (personal communication from Dr. Golden, King County).
Review of the Evidence: Cost – Effectiveness

Roberts et al., 2012 – UK Study

• Accelerated Partner Therapy
  • APT Hotline – telephone assessment of partners call a health advisor to ensure safe prescribing; once assessment completed partners attend collect treatment package from reception staff
  • APT Pharmacy – partners see trained pharmacist for assessment to ensure safe prescribing and treatment is dispensed post assessment

• Percentage of partners treated was significantly higher and time to treatment was significantly lower in both APT methods compared to routine contact tracing

• Methods are more costly than routine contact tracing but considering the superior effectiveness of these methods they were found to be cost effective.
Review of the Evidence: Attitudes/Perceptions of Professionals

• When is EPT not used frequently?
  • When EPT is NOT supported by legislation (Jotblad et al., 2012 limitations: convenience sampling, self-report; Rogers et al., 2007 limitations: low response rate, self-reporting; Taylor et al., 2011 limitations: sample representation, self-report)
  • Fear of the following: malpractice claims, potential medication reactions, missed counseling and infections, emergence of resistance

• When is it used frequently?
  • Females vs. males, laboratory confirmed cases, repeat infections, resistant partners, when no other option available.
Review of the Evidence: Attitudes/Perceptions of Patients

• EPT is preferred to standard contact tracing in the following (Gursahaney, 2011 limitations: self-report, low power; Melvin, 2009 limitations: low response rate):
  • Females, those with higher education, those with prior STI

• Among males (including MSM) (Melvin, 2009 limitations: low response rate; Holloway, 2011 limitations: lack of generalizability (Latino focus); selection bias)
  • Preference for having partner attend clinic
  • Preference for EPT in those with previous STI.
Current Draft Recommendations of EPT for future revision of the PIDAC STI Guidelines

• 12.1 Expedited Partner Therapy (EPT) is safe and effective and should be considered for heterosexual contacts of chlamydia [IA].
  • EPT should not be used for contacts of gonorrhea due to evolution of resistant strains
  • EPT is not recommended within the men who have sex with men (MSM) population, due to the high risk for HIV and syphilis
  • The College of Physicians and Surgeons of Ontario has a policy statement permitting EPT (available at: http://www.cpso.on.ca/policies/policies/default.aspx?ID=1848)
  • Client information sheets should be included in EPT.
Why EPT only for chlamydia in heterosexuals?

• Gonorrhea
  • There is some evidence to show EPT is successful in treating contacts of gonorrhea
  • However, evolving preferred gonorrhea treatment with IM ceftriaxone vs. oral cefixime for all cases and contacts (CDC recommendation) is being considered in Ontario. This change will make EPT not feasible

• Men who have sex with men
  • Because they are at high risk for HIV and syphilis infections, EPT for chlamydia could decrease the opportunity for counseling and screening for those infections.
Practice Implications

• EPT can be used in Ontario public health units under medical directives

• A patient information sheet should be included with the medication
  • Symptoms of chlamydia
  • Side effects
  • Allergy alert
  • Symptoms of pelvic inflammatory disease and encourage assessment if symptoms present.

• CDC has many EPT resources including health department policies and EPT evidence at: http://www.cdc.gov/std/ept/default.htm
Future Directions

• Operational research in Ontario would be useful to implement EPT more widely.
• Are concurrent infections being missed?
• Further data for EPT use/success in MSM
• Further studies to determine cost effectiveness in Canadian context.
Acknowledgements

- Library Services, Public Health Ontario
- Anusha Sundaram, Project Coordinator, Communicable Diseases, Public Health Ontario
- PIDAC STI Working Group.
References


References


References


Questions?

colin.lee@oahpp.ca

jennifer.pritchard@oahpp.ca