Optimizing HIV Perinatal Outcomes: Pharmacist Contributions in a Collaborative Care Model

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CSHP Goal & Objective

Goal 2: Increase the extent to which pharmacists help individual non-hospitalized patients achieve the best use of medications.

Objective 2.1: In 70% of ambulatory and specialized care clinics providing clinic care, pharmacists will manage medication therapy for clinic patients with complex and high-risk medication regimens, in collaboration with other members of the healthcare team.

BACKGROUND

The Northern Alberta HIV Program (NAP) provides cares for about 2,000 HIV patients (~30% female).

Over the past 15 years, we have experienced a significant ↑ in the number of pregnancies in our HIV-infected women.

Perinatal HIV transmission is largely preventable and is a high priority for the NAP.

Prevention strategies including maternal and neonatal antiretroviral therapy (ART) can ↓ perinatal HIV transmission from ~ 25% without ART to ≤ 1-2 %.

Perinatal HIV care is delivered by an interdisciplinary team including Infectious Disease physicians (adult and pediatric), obstetricians, virologists, pharmacists, social workers, nurses (clinical and public health), clinical psychologists and psychiatrists, and dietitians.

Because drug therapy is essential to prevention and management of HIV infection, pharmacists have played an integral role in optimizing maternal/neonatal outcomes.

RATIONALE & OBJECTIVES

ART is associated with numerous adverse effects, drug interactions, as well as requires a high level of adherence in order to prevent drug resistance.

The objective is to describe the significant role of the HIV pharmacist in contributing to positive patient outcomes.

METHODS/IMPLEMENTATION

Five key areas where the pharmacist has made significant contributions are outlined:

1) The Perinatal HIV Protocol
2) Antenatal care
3) Intrapartum care
4) Post-partum care
5) Evaluation of program outcomes

Of 257 infants born between January 1999 and Oct 2013, there have been 3 infants known to be HIV positive (< 1% transmission rate)

Alberta Health Services | Covenant Health

Reducing the Rate of Perinatal HIV Transmission for Mothers and Babies
Women's Health Program Guidelines and Protocols
August 2014

APPENDIX C

Patient Care Orders:
Maternal Delivery Orders for HIV Positive Women or Unknown HIV Status and High Risk

1. All orders must be completed and signed by the physician or nurse practitioner All co-signatures must be timed and dated within **24 hours.**
2. Orders may be deleted by stroking the order out and initialling the entry or by leaving prompt blank (boxes and / or lines).
3. Pre-printed orders may be initiated by (√). Box not checked will not be initiated.

Allergies ____________

Weight ____________

Date / Time	
	1. **Unknown HIV status (HIV labs on admission):**(no prenatal HIV test result OR possibility of ongoing HIV risk since prenatal HIV test) ☐ Stat HIV antibodies test (page virologist on call from Provincial Lab at UAH switchboard 780-407-8822) ☐ Rapid HIV test where indicated in cases of high risk, unknown HIV status (where available) ☐ HIV RNA PCR (Quantitative) – to be done only if HIV antibodies tested as positive. Collect 3 mL per tube in two EDTA tubes (lavender top).

Figure 1. Example of a patient care order.

Frontline Pharmacist

Role of the pharmacist in perinatal management of HIV disease

Combination antiretroviral therapy (ART) is recommended during pregnancy to reduce the perinatal transmis- in vertical HIV transmission, with reported transmission rates of <2% with optimal ART and other interventions

RESEARCH AND PRACTICE

Prenatal Screening and Perinatal HIV Transmission in Northern Alberta, 1999–2006

Christine A. Hughes, PharmD, Dalyce Zuk, PharmD, Michelle Foisy, PharmD, Joan Robinson, MD, FRCPC, Ameeta E. Singh, BMBS, MSc, FRCPC, and Stan Houston, MD, FRCPC

Figure 2. Publication of program outcomes.

RESULTS & EVALUATION

1) The Perinatal HIV Protocol- pharmacists have led this initiative; highlights include creation of patient care orders (PCOs) [Figure 1], a treatment algorithm, and patient education materials on neonatal ART. See: http://www.bugsanddrugs.ca/documents/HIV_Protocol.pdf

2) Antenatal Care- pharmacists collaborate with team members in the selection of appropriate maternal ART, support medication adherence/tolerability, and assist in coordinating ART required at the time of labour and delivery.

3) Intrapartum Care- pharmacists collaborate with team nurses to provide seamless care at the time of delivery. Infant medication teaching is done prior to discharge.

4) Post-partum Care- pharmacists collaborate with physicians in the follow-up of infants and mothers at clinic appointments, with attention to adherence and side-effects.

5) Evaluation of program outcomes- pharmacists have led evaluation of outcomes and sharing program successes. This includes presentation at HIV research meetings and publication of manuscripts [Figure 2].

CONCLUSIONS

Despite complex social issues including high risk behaviours (addictions) and marginalized groups (homeless, immigrants, mental illness),we have had tremendous success and very positive patient outcomes in our pregnant patients and their infants.

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