



**DRUG UTILIZATION AMONG SENIORS:**

**BENEFITS OF A PHARMACY NETWORK IN  
NEWFOUNDLAND AND LABRADOR**



# Newfoundland & Labrador Centre for Health Information

## Vision

Improved health and well-being of the people of Newfoundland and Labrador through quality health information

## Mission

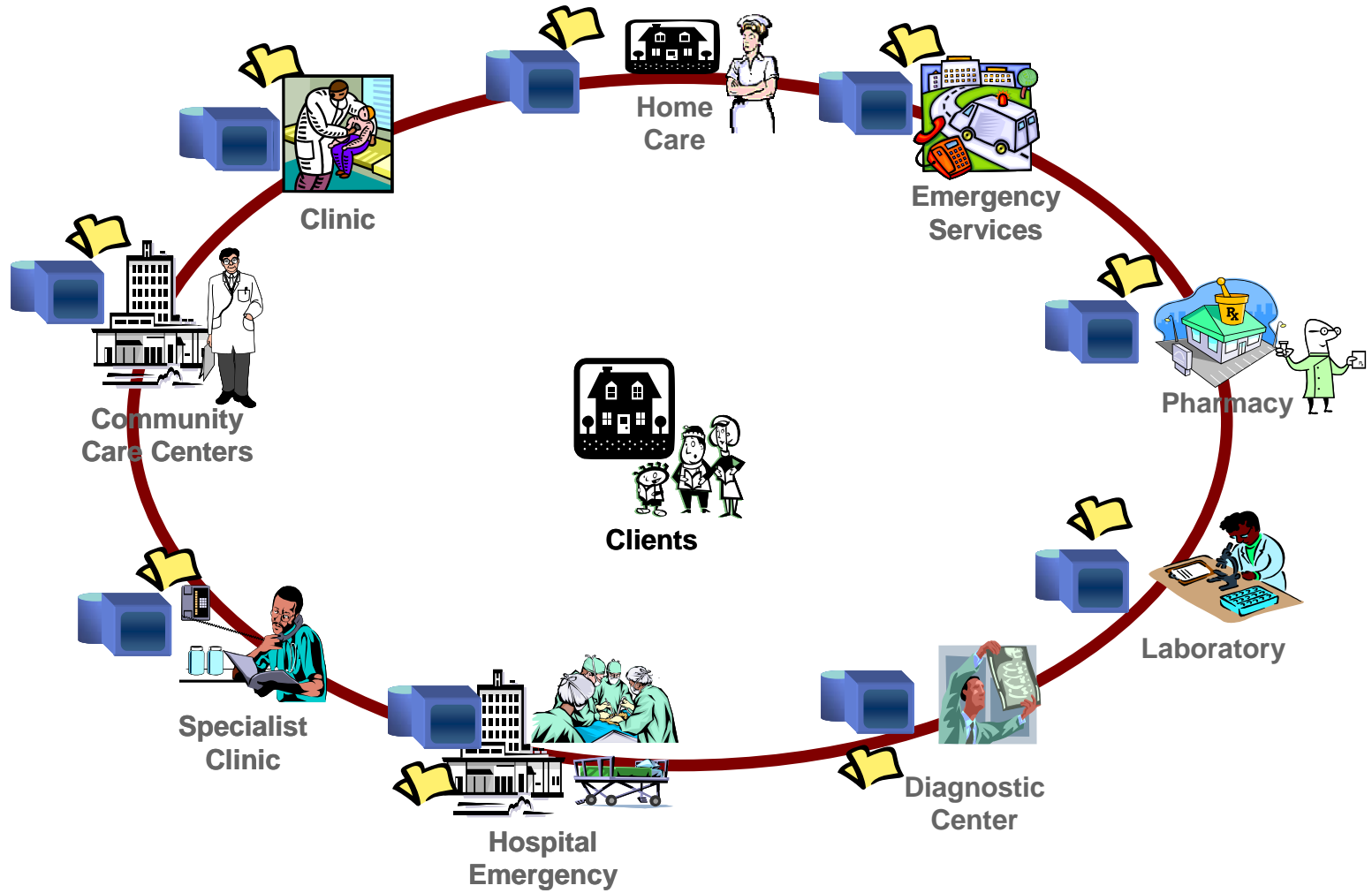
We are dedicated to providing quality health information to health service providers, decision makers, researchers and the public. Quality health information is information that is accurate, timely, and in the least identifiable form for the authorized purpose.

<http://www.nlchi.nl.ca/>



## Electronic Health Record (EHR)

- An **Electronic Health Record (EHR)** provides each individual with a secure and private lifetime record of their key health history and care within a health system.
- The record is available electronically to authorized health care providers anywhere, anytime, in support of high quality care



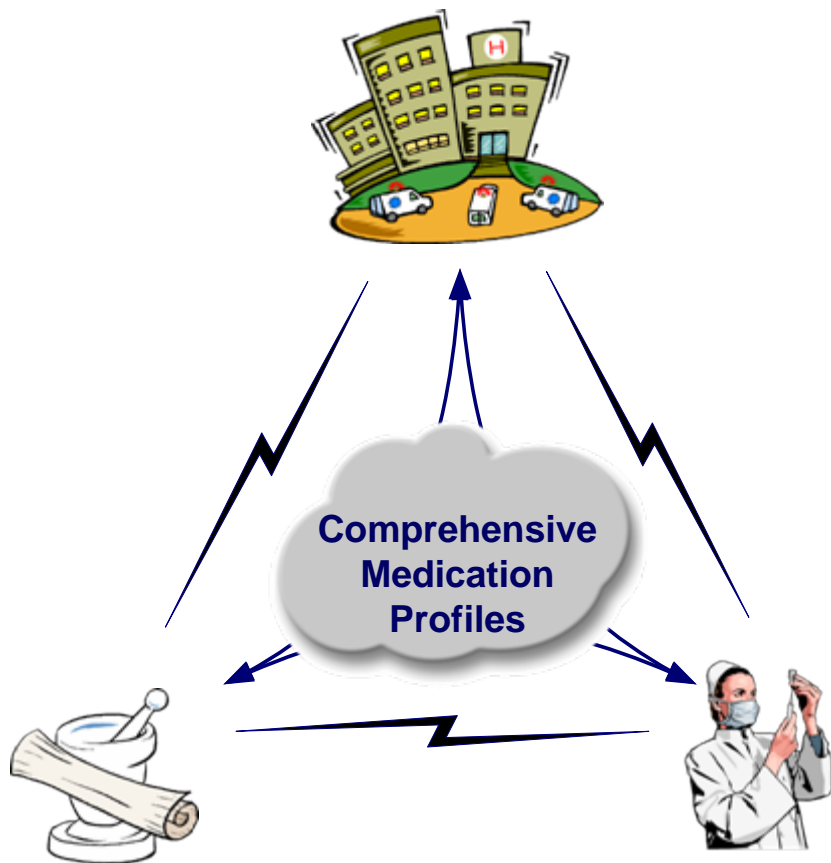


## **Electronic Health Record (EHR)**

**Four core components have been identified as the key building blocks of an EHR:**

- (1) a unique personal identifier/client registry;
- (2) a pharmacy network;
- (3) a laboratory network; and
- (4) a diagnostic imaging network

## NL Pharmacy Network



1. To link physicians, nurse practitioners, pharmacists and other authorized health care providers
2. To enable electronic exchange of medication information
3. To establish a comprehensive patient medication profile



## Evaluation of the Newfoundland and Labrador Pharmacy Network

- Pre/Post Study Design
- Four Major Studies:
  - ADEs Presenting at Emergency Rooms (Adult)
  - ADEs Presenting at Emergency Rooms (Pediatric)
  - Illegal Drug Trade of Prescription Drugs
  - Seniors' Drug Utilization

ADE: Adverse Drug Events

**Funding: Health Canada and Canada Health Infoway**



## Drug Utilization Among Seniors: Benefits Of A Pharmacy Network In Newfoundland And Labrador

- The purpose of this study is
  - to examine the potential impact of a Pharmacy Network on **inappropriate use** of medications among the senior population (age 65 years and older),
  - and to establish baseline data for comparison following the implementation of the Pharmacy Network.
- ***Hypothesis: the implementation of a pharmacy network in NL will enhance drug utilization among seniors.***





## **Drug Utilization Among Seniors:**

### **Benefits Of A Pharmacy Network In Newfoundland And Labrador**

- **Data Sources:**

- Focus Group
- Secondary analysis of Community Pharmacist Survey
- Emergency room chart review
- In-home interviews of seniors living in the community



## **Drug Utilization Among Seniors:**

### **Benefits Of A Pharmacy Network In Newfoundland And Labrador**

#### ***Focus Group***

- The Pharmacy Network Clinical Advisory Committee, composed of physicians, community pharmacists and nurses.
- Major themes:
  - Poly pharmacy issues
  - Drug interactions
  - Multiple pharmacies/physicians
  - Compliance “haven't picked up her medication in six months”
  - Pharmacy network can be a valuable resource:
    - » Flag wrong medications/dosages.
    - » E-prescribing “for everyone”.
    - » Access to laboratory results.
- Suggestion: ADE.



# Community Pharmacists Survey

Centre for Health Information

Newfoundland and Labrador Pharmacy Network

- Four hundred seventy one surveys were distributed to community pharmacists in the province of Newfoundland and Labrador.
- One hundred thirty seven surveys were returned by March 14th, 2007.

**Response rate of 29 %.**



## Community Pharmacists Survey

### Urban vs. Rural

### Pharmacy Network Benefits

**1. The Pharmacy Network will have a positive impact by enhancing the utilization of prescription drugs for our senior (65+) population.**

Response	Urban Percentage (frequency)	Rural Percentage (frequency)	Total* Percentage (frequency)
Strongly Disagree	1.5 % (1)	0	0.7 % (1)
Disagree	0	2.5 % (1)	0.7 % (1)
Neutral	15.4 % (10)	20 % (8)	19.1 % (26)
Agree	50.8 % (33)	30 % (12)	<b>44.1 % (60)</b>
Strongly agree	26.2 % (17)	47.5 % (19)	<b>32.4 % (44)</b>
Not sure or N/A	6.2 % (4)	0	2.9 % (4)
Total Respondents	65	40	136

\* Location not given by all respondents, thus sum of urban and rural not equal to total; one individual did not respond to this item.



## **Drug Utilization Among Seniors:**

### **Benefits Of A Pharmacy Network In Newfoundland And Labrador**

#### ***In-home interviews of seniors living in the community***

- A sample of 426 seniors will be recruited using a random digit dialing procedure and self-referral through advertisement.
- To be eligible for the study, an individual must satisfy each of the following inclusion criteria:
  - » Speak English;
  - » Age 65 years or older;
  - » Living in their own home/apartment or with family/friends (i.e. not living in a nursing home or other facility);
  - » Living in the St. John's/ Mt. Pearl area;
  - » Using at least one prescribed medication; and
  - » Have not received a home visit from a pharmacist within the past year.



## **Drug Utilization Among Seniors:**

### **Benefits Of A Pharmacy Network In Newfoundland And Labrador**

#### ***In-home interviews of seniors living in the community***

Information to be collected during the in-home interview will include

- date of birth, sex, education level, marital status, living arrangements,
- list of current medications and doses,
- physician and pharmacist access and utilization and barriers to using medications appropriately.

The rate of potentially inappropriate medication use will be determined. An expert panel will be recruited to review and update Beer's criteria prior to analysis.



## **Drug Utilization Among Seniors:** **Benefits Of A Pharmacy Network In Newfoundland And Labrador**

- Other ideas:
  - Administrative data
  - Nursing Homes

**Other suggestions?**



Thank you!

Questions?