Patient Typologies for Cost-Related Non-Adherence to Prescription Medications

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Cost-Related Non-Adherence (CRNA)

- CRNA = when persons skip doses, split pills, or do not fill their prescription drugs due to cost reasons
- 1 in 10 Canadians experienced CRNA in past year (Law et al., 2012)
- Little is known about CRNA in Canada beyond this simple prevalence data
- (No known qualitative investigation of CRNA specifically)

Research Design

- Qualitative component of multi-method study
- Objective: Provide an in-depth understanding of CNRA and relationship with factors influencing adherence
- Overall grounded theory approach
- Framework analysis for this portion of qualitative work

Framework Analysis

- Uses inductive thematic analysis to create major categories and sub-categories
- Followed by coding each case (individual) across the major categories
- Allows for comparing data across cases and within cases

Sampling and Sample

- Semi-structured, in-depth interviews with adults who have engaged in CRNA
- Variety of recruitment locations/methods
- Purposeful sampling based on factors associated with CRNA (e.g. income, diseases with high cost drugs)
- Sample size: 39 interviews in BC & ON
  - Vancouver n=15 Toronto n=15
  - Prince George n=5 Hamilton n=4

Study Participants

- Sample size: 39 → 35 persons
- 4 persons did not or were not currently experiencing CRNA
  - 2 persons not having trouble paying for drugs
  - 1 person experiences significant financial duress because of high drug costs + high deductible + delayed reimbursement
  - 1 person self-administers more than prescribed and cannot get always afford second (fraudulent) prescription

Study Participants (2)

Sex	**n = 35**
Female	19
Male	16
Age Groupings	
19-24 years	1
25-34	8
35-44	5
45-54	12
55-64	4
65+	5
Low Income?	
Yes	26
No	9

Study Participants (3)

Drug Insurance	**n = 35**
None	11
Private only	9
Public only	10
Private + Public	5
# of Drugs Experiencing CRNA in present	
0	5
1	16
2	4
≥ 3	10

CRNA Typology Components

- Two components related to cost, two related to individual's adherence:

1. Burden of drug cost on budget
2. Insurance design feature driving drug cost
3. Importance of drug effects from individual's perspective
4. Individual's overall financial flexibility (low income or not)

Using Components for Classifying

- Shift unit of analysis from individual to prescription medication
  - Present CRNA > past CRNA
  - Multiple CRNA in present, chose "most important drug" based on combination of:
    1. Burden of drug cost on budget
    2. Importance of drug effects from individual's perspective

Burden of Drug Cost on Budget	n = 35
Very High (infringes on essentials)	13
High (infringes on important)	5
Moderate (infringes on pleasure)	14
Low (does not infringe very much)	3
Insurance Design Feature Driving Cost	
No insurance entirely	14
No insurance for specific drug	8
Deductible too high	6
Co-pay too high	4
Cap too low relative to expenses	2
No direct billing	1
Importance of Drug from Individual's Perspective	
Non-negotiable with high QOL	5
Negotiable with high QOL	20
Negotiable with low QOL	10

“Expected” Patterns

- People who experience CRNA because they are of low income and most drug costs burdensome
- People who are prescribed a drug with low quality of life effects and not wanting to pay (much) for such a drug

“Unexpected” Patterns

- CRNA with non-negotiable drugs with high quality of life effects (life saving [insulin] or high key QOL [pain, anti-depressants])
  - 4/5 drug cost very high (infringes on essentials)
  - 2 not filling at all—1 helped by doctor, other in bad shape
  - 2 skip/split—both situations have low tolerance for irregular dosing
  - 1 suboptimal drug substitution

"Unexpected" Patterns (2)

- CRNA yet not low income individual
  - 8/9 for negotiable drug with high quality of life
  - 2 had many competing demands for finances makes cost burden too high
  - 2 had recent change in coverage and still processing cost implications and decision making
  - 3 high or very high drug costs—often multiple health needs + insurance restrictions

Discussion

- CRNA much more nuanced than previously described
  - Multiple varied CRNA/non-CRNA in same individual
  - CRNA varies over time
  - Medication key unit of analysis
- Cost-sharing heavy burden under a variety of conditions
  - CRNA is not just a low income issue
  - Catastrophic drug coverage not sufficient to avoid CRNA, regardless of income level

Policy Implications

- CRNA minimization will require multifaceted policy intervention & design or overhauling current drug insurance approaches
- Little (but some) evidence of moral hazard behaviour
- Are cost sharing features worth:
  - The policy effort?
  - The financial, health, and quality of life burdens on (sick) individuals

Questions?

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