Cost-related medication noncompliance in times of economic hardship

By Ryan Ricker
Woman says her son couldn't afford his insulin – now he's dead
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$375,000 price leads disabled mom to ration meds
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Americans are dying because they can’t afford their insulin. That’s now a 2020 campaign issue.

Candidates are shunning donations from Big Pharma. Are they finally ready to take on drug prices that are climbing through the roof?
Key Results

1.) As unemployment increases, cost-related medication noncompliance increases slightly.

2.) Those unemployed for a year or more are worse off than those unemployed for less than a year.

3.) Education and income serve as “protective” factors.
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What is CRN?

What she said Alec didn't tell her was that he was struggling with that cost. He'd started trying to ration his insulin to make it last longer. It wasn't enough. He died after falling into a diabetic coma alone in his apartment.

Fearful of burdening her family with exorbitant bills, Patel said, she's begun rationing her meds -- taking two pills a day, instead of four. She said she's trying to stretch her three-month supply for as long as possible.

But upon arrival to her pharmacy, she learned that, despite being insured, one of her heart medications would cost over $200 per month. Though she had $200 in her bank account, she also had eight grandchildren to care for and feed. She figured she could skip a few days of medication and fill the prescription two days later, when she was due to receive her Social Security check.
What is already known about CRN?

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Key Results

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- Socioeconomic factors
- Demographic factors
- Participation in government assistance programs
What is not known about CRN?

Economic hardship

CRN
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Economic hardship

Job loss
Unemployment

CRN

Health behaviors
Healthcare utilization
Economic hardship was measured as the annual state unemployment rate from 2013 to 2017.

Behavioral Risk Factor Surveillance System from the Centers for Disease Control and Prevention

“Not including over-the-counter (OTC) medications, was there a time in past 12 months when you did not take your medication as prescribed because of cost?”
\[ Y = \alpha + \beta x + \varepsilon \]

- \( Y \) = State level CRN rate
- \( \alpha \) = CRN rate when unemployment rate is zero
- \( \beta \) = Slope
- \( x \) = State level unemployment rate
- \( \varepsilon \) = Error term
Data and Methods

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- Job loss
  - Loss of income
  - Loss of employer sponsored health insurance
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Job loss → Loss of income → Loss of employer sponsored health insurance → Less disposable income and more expensive prescriptions
2.) Those unemployed for a year or more are worse off than those unemployed for less than a year.
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Unemployment insurance runs out at 26 weeks
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People of higher socioeconomic status are more likely to engage in CRN because of decreased access to government assistance.
Why does this matter?

CRN can have serious consequences
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ADDY BAIRD  MAR 17, 2019, 7:00 AM
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Result #3 opens up the door for further study on socioeconomic factors and CRN
Why does this matter?

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Result #3 opens up the door for further study on socioeconomic factors and CRN

Once socioeconomic factors are better understood, we can develop appropriate interventions to decrease CRN
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