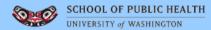
Is Distance to Provider a Barrier to Care for Medicaid Patients with Breast, Colorectal, and Lung Cancer?

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Background

- Distance to provider (DTP) might be an important barrier to timely diagnosis and treatment for cancer patients who qualify for Medicaid coverage.
- Driving time as opposed to driving distance might be a better measure of travel burden.



Study Objectives

To test the hypothesis that the distance from a Medicaid cancer patient's residence to the location of his/her primary care provider is associated with stage at diagnosis and time to treatment.

Research Design

- •We linked Washington State Cancer Registry data with Medicaid enrollment files for 3,917 breast, colorectal (CRC) and lung cancer Medicaid patients from 1997 to 2003.
- Driving distances and times from patient residence to primary care provider were calculated using MapQuest.com.
- Model 1: Logistic regression tests hypothesis that travel burden is associated with stage at diagnosis
- •Model 2: Logistic regression tests hypothesis that travel burden is associated with probability of being treated within 1 year of diagnosis
- •Model 3: Linear regression test hypothesis that travel burden is associated with time to treatment after diagnosis

Results

Table 1. Adjusted Odds Ratios from Logistic Models: Dep. Var. = 1 if Distant Stage									
	Breast			CRC			Lung		
Travel Burden	OR	p-val	AIC	OR	p-val	AIC	OR	_p-val	AIC
Miles (100's)	1.488	0.037	1946.6	1.117	0.732	753.2	1.088	0.699	1259.7
Hours	1.270	0.016	1945.1	1.076	0.667	753.1	1.038	0.749	1259.8
n		1,407			723			1,787	
Mean Dep. Var.		0.098			0.293			0.609	

Table 2. Adj. Odds Ratios from Logistic Models: Dep. Var. = 1 if Treatment Started < 12 months After Dx

	Breast			CRC			Lung		
Travel Burden	OR	p-val	AIC	OR	p-val	AIC	OR	p-val	AIC
Miles (100's)	0.828	0.690	411.06				0.964	0.880	969.75
Hours	0.894	0.649	411.01				0.990	0.941	969.81
n		1,241			511			695	
Mean Dep. Var.		0.957			0.986			0.443	

Note: Excludes distant stage

Table 3. Linear Regression Model Coefficients: Dep. Var. = Number of Days Treatment Started After Dx

	Breast			CRC			Lung		
Travel Burden	Coeff.	p-val	AIC	Coeff.	p-val	AIC	Coeff.	p-val	AIC
Miles (100's)	3.02	0.39	11685.3	14.57	< 0.01	4810.9	4.84	0.54	3080.5
Hours	1.37	0.44	11685.5	5.86	0.02	4815.1	0.82	0.84	3080.8
n		1,186			493			296	
Mean Dep. Var.		21.7			14.5			33.0	

Note: Excludes distant stage

Conclusions

- Greater distance to primary care provider is associated with diagnosis at later stage for breast cancer patients on Medicaid in Washington State.
- Greater distance to primary care provider is associated with later treatment after diagnosis for CRC patients on Medicaid in Washington State.
- •Driving time is not a better measure of travel burden than driving distance.

Policy Implications

 Greater efforts are needed to provide cancer screening and timely care to Medicaid patients who live in remote areas of the state.



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