

Physicians Remuneration in Saskatchewan: Is it a Case of Incentive Misalignment?

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Do Saskatchewan Health Pay Policies Encourage Medical Specialization?

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Introduction

Physicians recruitment and retention in Saskatchewan pose significant challenges. Various programs have been instated to boost recruitment and retention efforts. These programs include assistance with relocation, academic incentives, and legislations allowing more Foreign Medical Graduates with acceptable qualifications to practice in Saskatchewan. In early 2007 Media attention focused on a finding that Saskatchewan's physicians, for the first time, maybe receiving the highest remuneration in the country. Some argue that this is merely due to some recruitment shortcomings that resulted in Saskatchewan physicians working longer hours and carrying out more procedures than their counterparts in other provinces.

Purpose of the Study:

- To examine the changes in physicians' income in Saskatchewan between 2001 and 2006, with focus on the highest and the lowest paid specialties and on general practice.
- To assess any correlation between income changes of physicians in the highest and lowest paid specialties (as well as general practice) and various recruitment and retention variables.

Method:

Income statistics of Saskatchewan physicians during the period between 2001 and 2006, as presented in the annual financial and statistical reports of Saskatchewan Health, were reviewed.

For the purpose of assessing recruitment and retention challenges during the same period data pertaining to the following variables were obtained:

- Places of graduation: The ratio of Saskatchewan graduates to the total work force in different specialties (including general practice) was calculated.
- Percentage turnover.
- Work load: estimated through the changes in catchment area population size per physician and average number of physician patient contacts as calculated using formula 1:

Patient contacts (000s) Year 2 X population / physician Year 2 - 1
 Patient contacts (000s) Year 1 X population / physician Year 1

The above three variables were used as proxy measures of recruitment and retention.

Results:

Specialists in Saskatchewan received on average \$ 131,900 more annually than family physicians. Their pay increased by an average of 4.6 % annually, while family physicians pay increased by an average of 4.1 % annually.

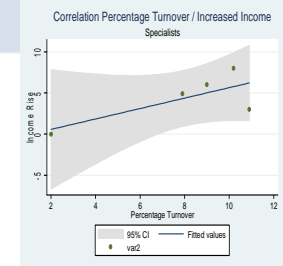
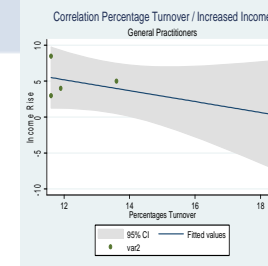
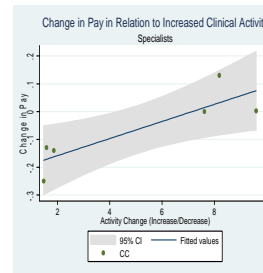
As for specialists the increased pay was negatively correlated with the availability of the local graduates.

Specialties with higher mean increase in pay tended to have a more negatively skewed pay distributions.

Not only that Specialists pay and pay increase rates are higher than family physicians, specialists also tended to have higher pay rise at times of increased turnover. The pay rise rates for family physicians tended to be lower in these circumstances.

Practice	Family Physician	Specialist
Number 2006	767	440
Grouping	Metro group 314 Metro solo 70 Urban group 119 Urban solo 30 Rural group 183 Rural solo 51	Pediatricians 37 Psychiatrists 35 Cardiac Surgeons 7 Ophthalmologists 24 Otorhinolaryngologists 13 Pathologists and diagnostic Radiologists 48 Other 276
Population per physician 2006	1300	Pediatricians 27600 Psychiatrists 26200 Cardiac Surgeons 145000 Ophthalmologists 42500 Otorhinolaryngologists 78500 Pathologists and diagnostic Radiologists 21300

Practice	Work load change (Formula 1 Col 1)
Cardio surgeons	0.003
Ophthalmologists	0.13
Pediatricians	0
Otorhinolaryngologists	-0.13
Psychiatrists	-0.25
Radiologists and Pathologists	-0.14
General Practitioners	-0.2



Tables and diagrams:

- 1: Total number of physicians / population per physician.
- 2: Mean changes of physicians workload as calculated using formula 1- Column 1.
- 3: Changes in pay in relation to changes in workload ($r = 0.8$).
- 4: Mean annual turnover and percentage of local graduates to total workforce.
- 5: Income statistics.
- 6: General Practitioners: Income change in percentage points / Percentage turnover per year, $r = -0.72$
- 7: Specialists Income change in percentage points / Percentage turnover per year, $r = 0.73$

Declaration of interest: none

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Practice	Metropolitan GPs group	Metro GPs solo	Urban GPs group	Urban GPs solo	Rural GPs group	Rural GPs solo	All GPs	Specialists	All Physicians
Mean annual turnover 2001-2006	10.76%		11.94%		18.18%		13.4%	8%	11.3%
Sask graduates to total workforce	48%	31%	21%	16%	23%	11%	32%	38% Cardiologists 14% Ophthalmologists 14% Pediatricians 32% ENT 53% Psychiatrists 37% Radiologists and Pathologists 47%	35%

Practice	Metropolitan GPs group	Metro GPs Solo	Urban GPs group	Urban GPs solo	Rural GPs group	Rural GPs solo	All GPs	Specialists	All Physicians
Highest paid	57000		74800		67200		74800	156650	156650
Average payment	21300		25790		25400		23420	38610	28840
Average Annual Percent Change in pay 2001-2006	5.62%	7.42%	2.7%	6.7	2%	6.40%	4.1%	4.6%	4.52%

References:

- Saskatchewan Health: Annual Financial Reports 2001 - 2006.
- Saskatchewan Health: Annual Statistical Reports 2001 - 2006.
- Wright CJ. Physician remuneration methods: the need for change and flexibility. *CMAJ Canadian Medical Association Journal*. 154(5):678-80, 1996 Mar 1.
- Beasley JW. Karsh BT. Sainfort F. Hagenauer ME. Marchand L. Quality of work life of family physicians in Wisconsin's health care organizations: a WRen study. *WMJ*. 103(7):51-5, 2004.
- Bonds RG. Pulliam KA. Physician recruitment & retention: practical techniques for exceptional results. American Hospital Publishing, Inc. 1991.



The StarPhoenix

Sask. doctors best paid in Canada

Published: Friday, February 02, 2007



Method

- Sample: specialty year 1999-2006.
- 16 specialties and family medicine.
- Medical: Internal medicine, Pediatrics, Psychiatry, Anesthesiology, Dermatology, Cardiology.
- Surgical: General Surgery, Ophthalmology, ENT, Orthopedics, Plastic Surgery, Cardiac Surgery, Neurosurgery, Urology, ENT.
- Investigative: Diagnostic Radiology, Clinical Pathology.
- Family Medicine / General Practice.
- Inflation adjustment.
- No non-fee for service payments included.
- Independent variables: physician-population ratio (SK-CA), local graduates to total workforce (SK), Turnover, SK/CA



Saskatchewan Demographics : key figures

- Population: 996,869 (July 1st 2007 estimate)¹, 968,157 (1996 census).
- Slow decrease in total population to 2005 (average 3000 people / year 1995), gradual increase thereafter (more than 1500 people per month)¹.
- 5 year growth of senior population is slowing down (1.18% in 2006 census, 4.06 in 1996 census), but seniors / population ratio remains the highest in Canada (15.5 % Saskatchewan, 13.7% national average) ².
- Population density 1.6 / km² (Canada 3.3 / KM ²).

Saskatchewan Economy: Key Figures

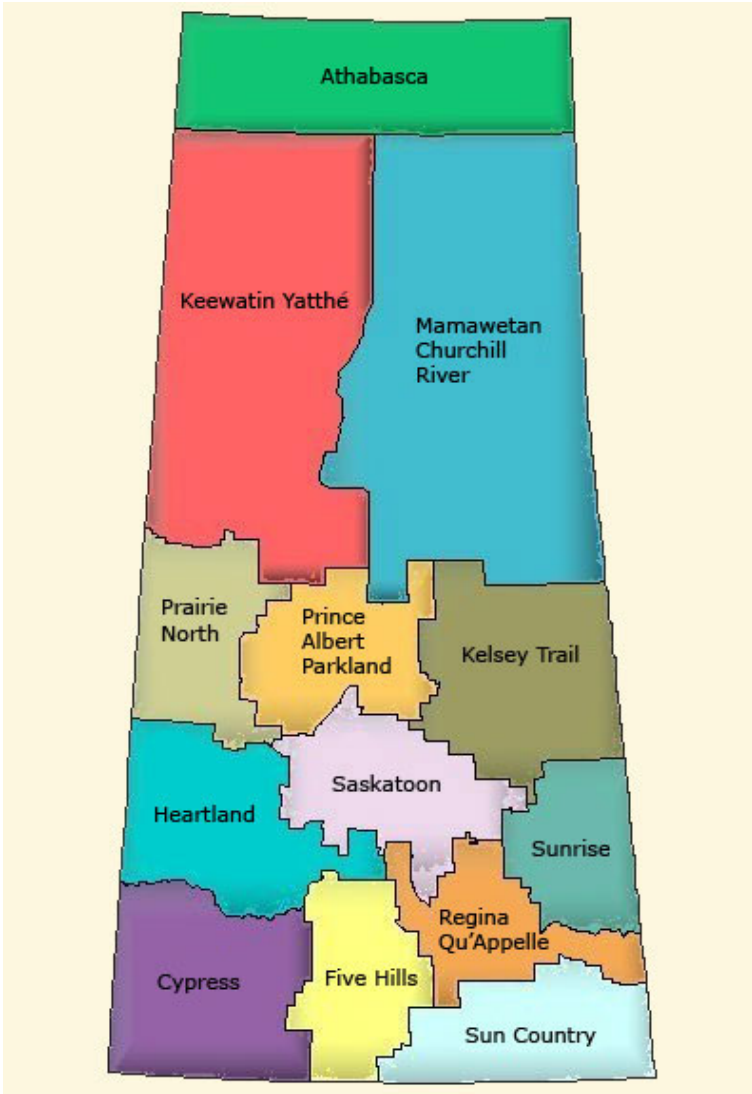
	199	200	200	200	200	200	200	200
Total Annual Personal Income (including wages, salaries and any supplementary labor income) ²	22,346	23,159	23,647	24,160	25,388	26,921	27,953	28,872
Saskatchewan Real GDP (Millions Fisher \$) ²	30,030	31,040	30,465	30,496	31,860	32,797	34,238	34,544
Canada Real GDP (Millions Fisher \$)¹	969,750	1,020,488	1,038,702	1,069,282	1,088,773	1,124,688	1,157,705	1,189,535
Saskatchewan as a Percent of Canada Real GDP	3.1	3	2.9	2.9	2.9	2.9	3	2.9
Saskatchewan Real GDP Per Capita	29,595	30,801	30,461	30,622	32,029	32,966	34,586	35,056
Ratio of Saskatchewan/Canada Real GDP Per Capita	0.93	0.93	0.91	0.90	0.93	.94	0.96	0.96
New Capital Investment ²	6.85	7.01	7.13	6.76	7.24	7.46	8.87	9.65

1- Statistics Canada.

2- Saskatchewan Bureau of Saskatchewan.



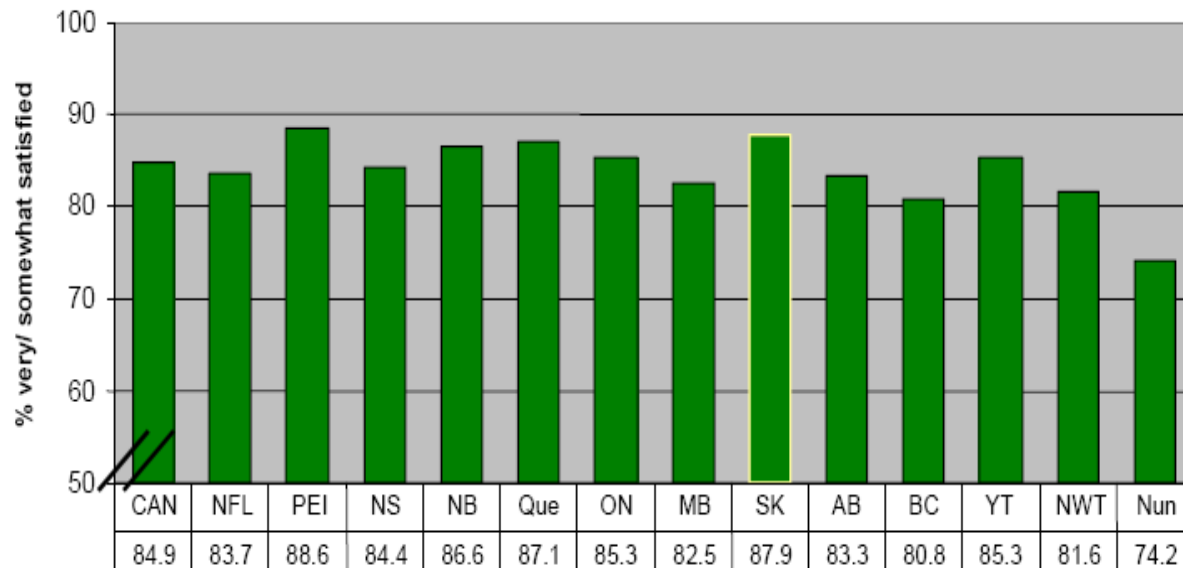
Saskatchewan Healthcare: Key Figures



Saskatchewan Healthcare: Key Figures

- Favorable patient satisfaction with healthcare services as compared to the Canadian averages, and favorable subjective measures of health as compared to the Canadian averages ¹.

Patient Satisfaction Overall Health Services,
Provincial/ Territorial Comparison, 2003
(age-standardised)



Years of Healthy Life at Birth & Age 65, Canada & Saskatchewan

	Canada		Saskatchewan	
	Male	Female	Male	Female
At birth	68.3	70.8	67.3	70.2
Age 65	12.7	14.4	12.5	14.6

Physicians in Saskatchewan: Key Figures

- The number of Family Physicians currently practicing in Saskatchewan is 767, population per physician is 1300.
- Among family physicians 253 are trained in Saskatchewan, most of those trained outside the province were trained in Africa ($n = 264$).
- Among Family Physicians 384 practice in the metropolitan centres, 149 practice in urban centres and 234 practice in rural clinics.
- Currently practicing specialists number is 534.
- Among specialists 208 were trained in Saskatchewan . The majority of those trained out of the province come from other provinces ($n = 109$)
- All physicians billing 1302, in September 2006 there were 1,772 physicians licensed to practice in Saskatchewan, the gap consists of completely non-fee for service physicians, retired physicians, and Saskatchewan license holders practicing in other jurisdictions.



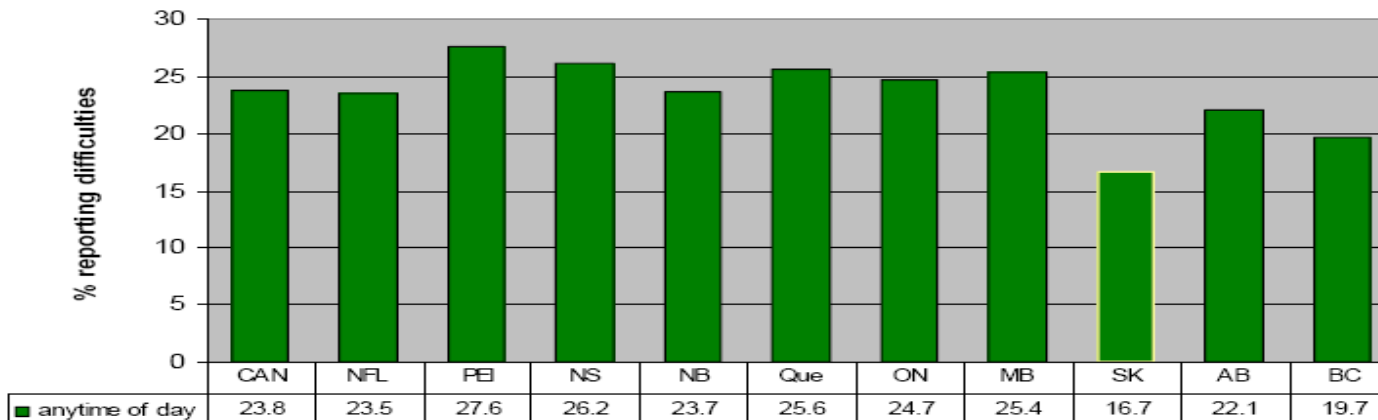
Physician Role in Saskatchewan Communities: Key Figures

- Community satisfaction with medical services is consistently higher than with other health services.¹

Satisfaction Rating	2001	2003	2005
Overall health services	85.3	87.9	87.3
Services received in hospital	82.9	87.8	83.8
Family doctor/other physician services	92.6	94.0	92.3
Community-based services	90.3	83.2	82.5

- Patients report less difficulty accessing the service than anywhere in Canada.²

Difficulties accessing immediate care
Provincial Comparison, 2003
(age-standardised)



1- Canadian Community Health Survey, Cycles 1.1, 2.1, and 3.1.

2- Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group, Statistics Canada; Ottawa: ON

Findings: Summary

	Count
Population Per Physician higher SK	116
Population Per Physician Higher CA	10
Jointly Defined	126

Variable	Mean	Min	Max
Sask Grad Ratio	38.2	0	88.89
Sk to Ca	1.8	.85	4.25

Variable	Mean	Std. Dev.	Min	Max
Physician Number Change	3.3	11.2	-21.4	33.
Diff Ratio	4.0	8.3	-19.4	34.3
Average Change 1995-2006	3.1	2.9	-2.86	12.3
Inflation Adjusted	1.8	8.2	-20.9	31.8

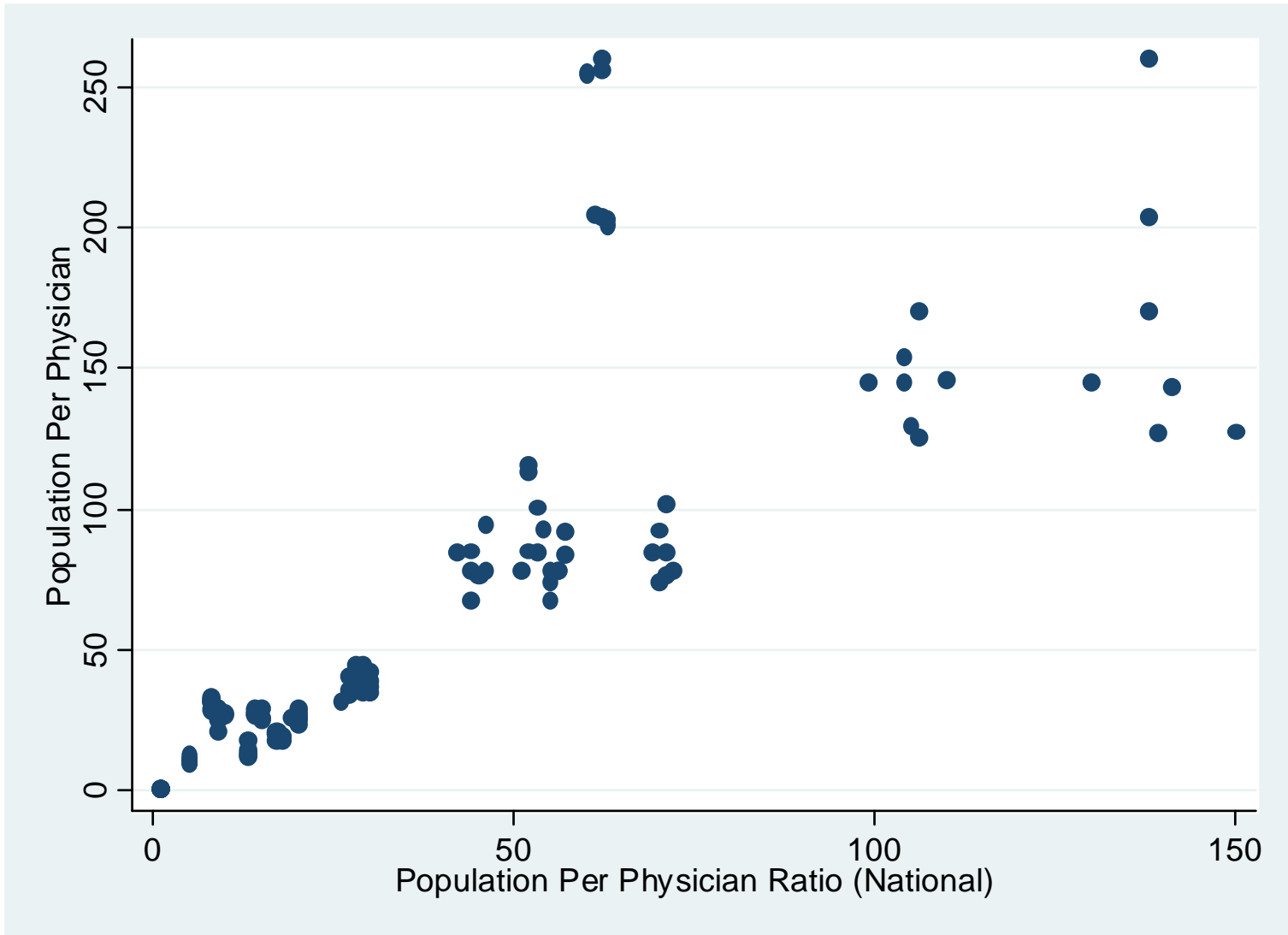


Physicians Turnover in Saskatchewan

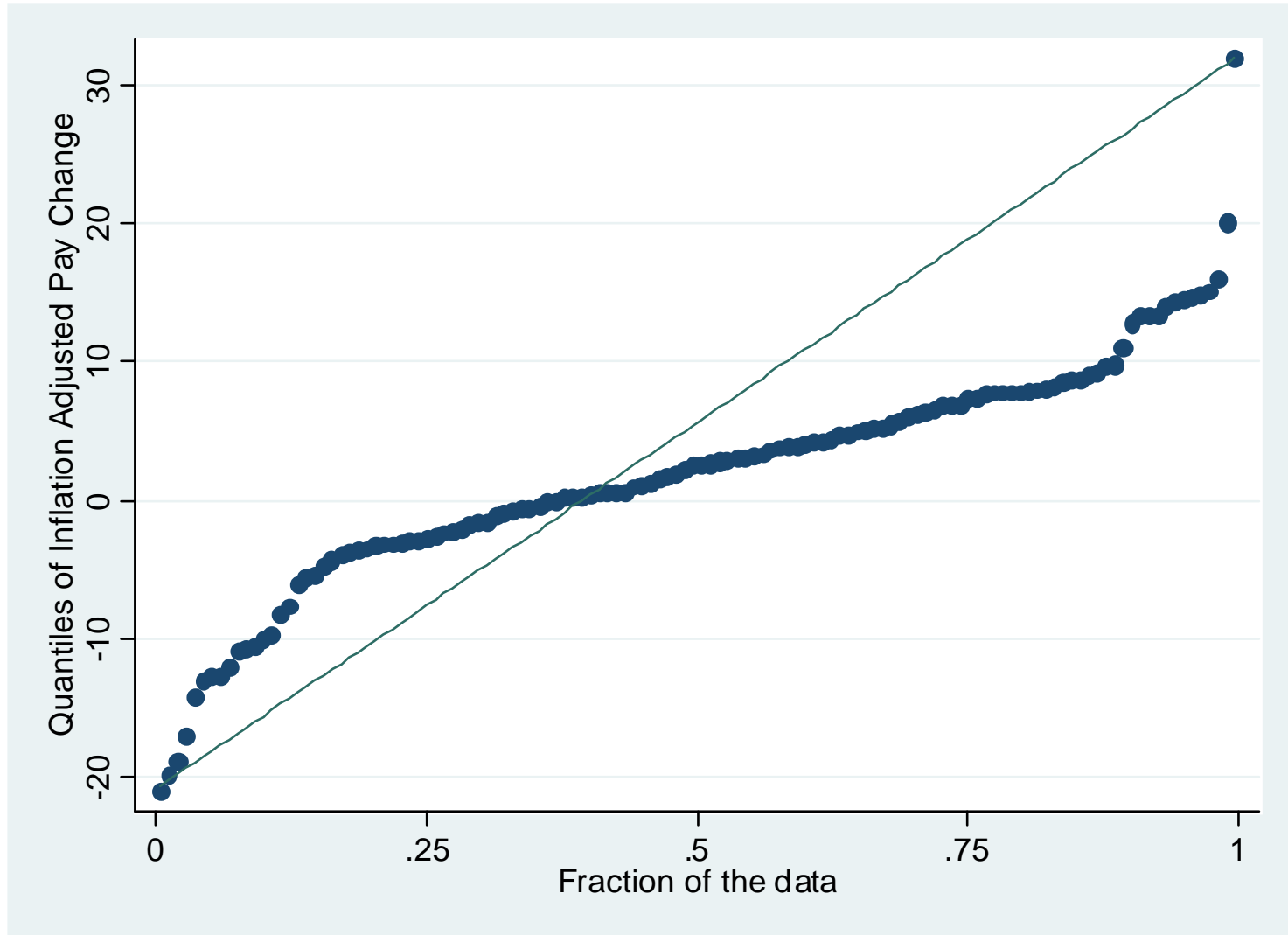
Turnover	General Practitioner / Family Physicians	Specialists
2001-2002	18.4 %	2
2002-2003	11.6%	10.9
2003-2004	13.6 %	7.9
2004-2005	11.6 %	10.2
2005-2006	11.9	9



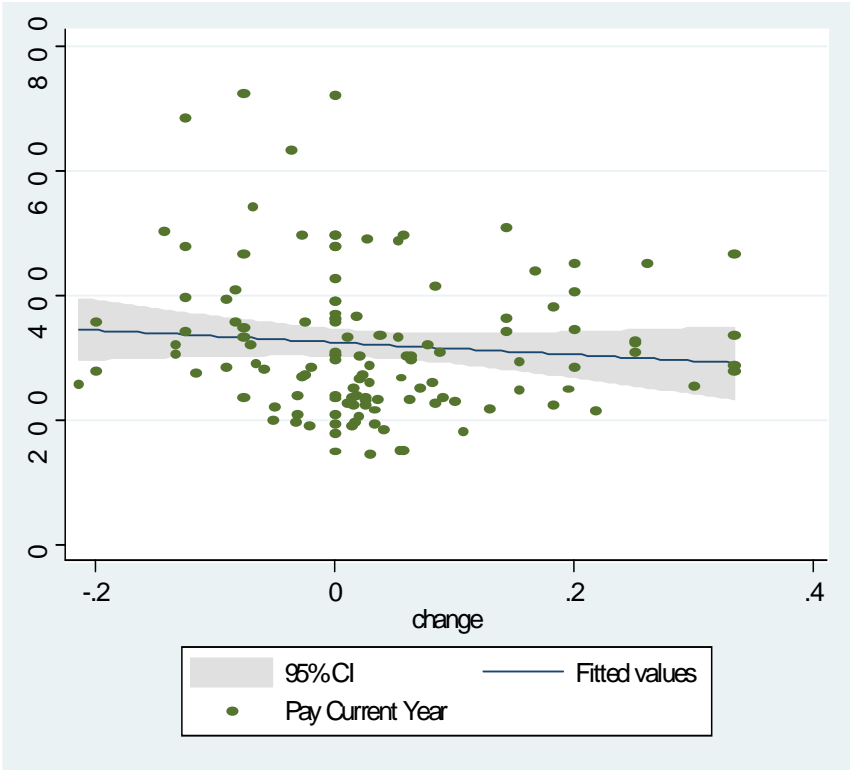
Changes in Population / Physician Ratio SK/CA



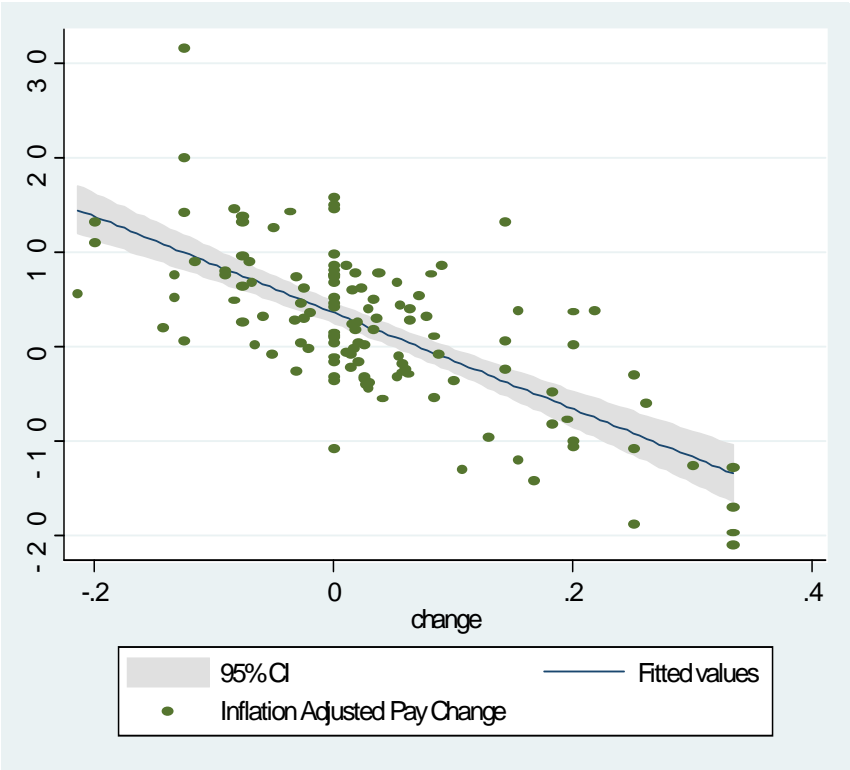
Distribution of Inflation Adjusted Pay Changes



Change in Pay Against Changes in Physician to Population Ratio



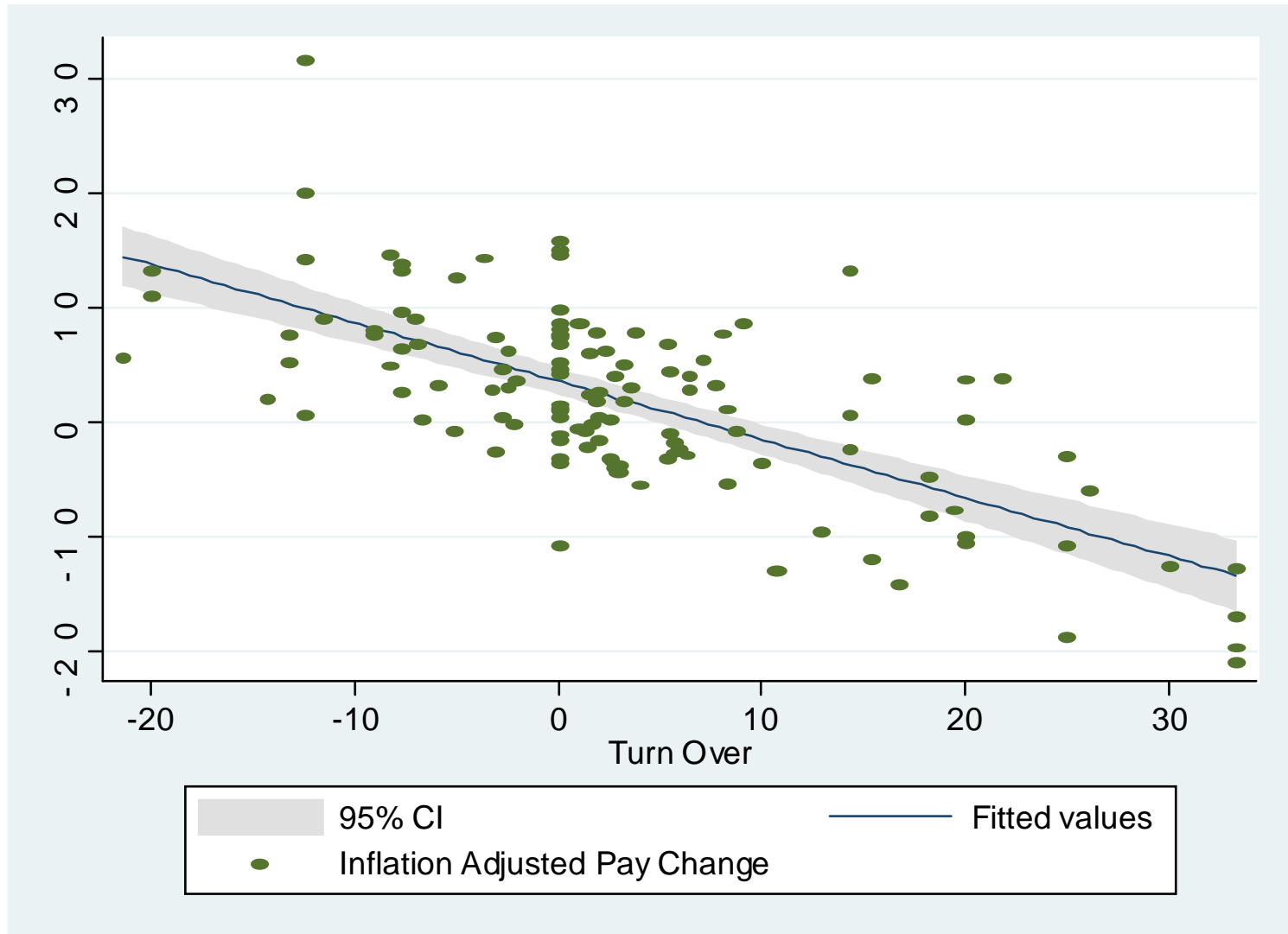
Actual Pay



Inflation Adjusted Pay Change

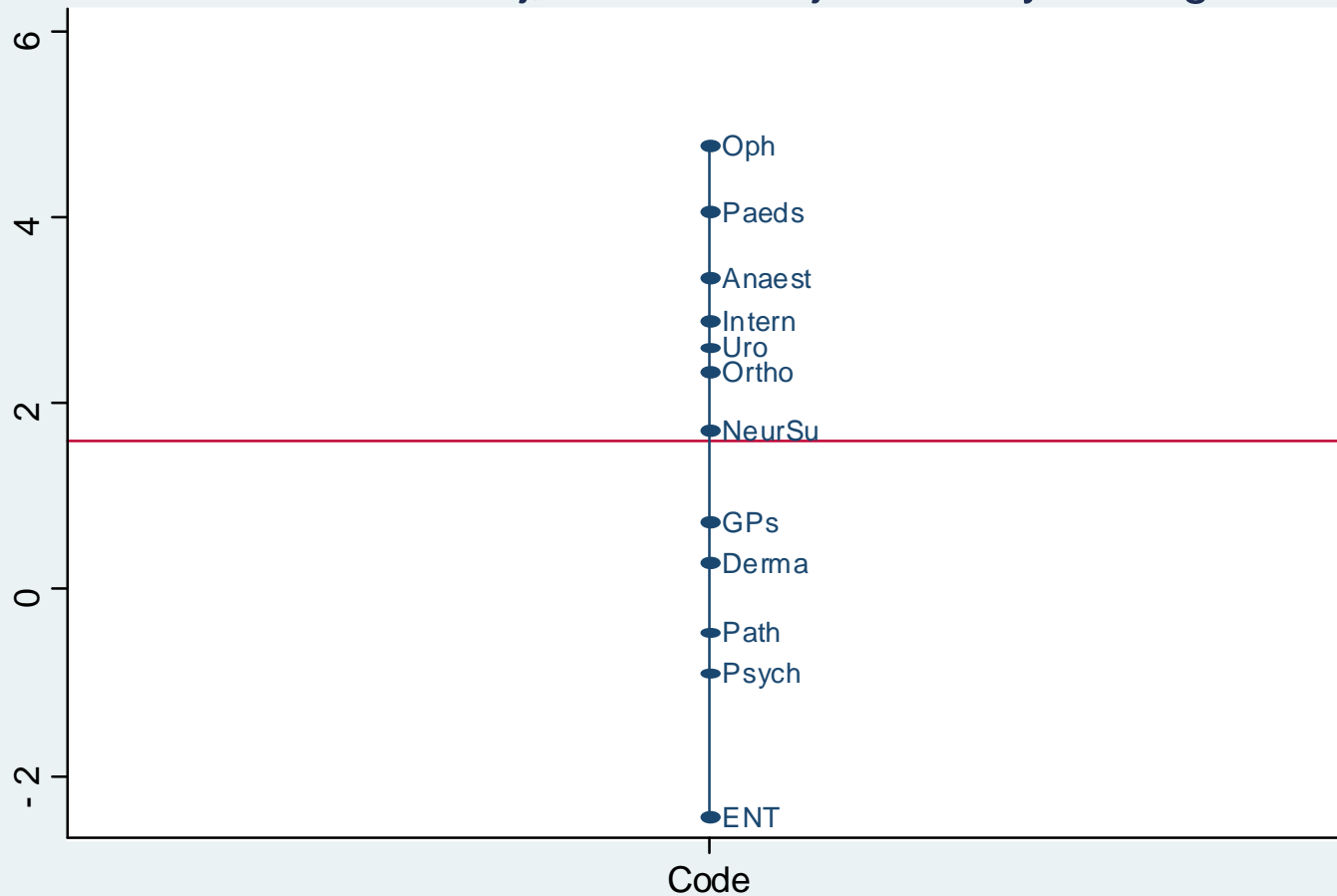


Inflation Adjusted Pay Changes to Physicians Turnover



Inflation Adjusted Pay Changes / Specialty

Means of InfAdj, Inflation Adjusted Pay Change



Conclusion

- This analysis is limited by the short period included, and by the exclusion of physicians receiving their remuneration on non-fee for service basis. It does, however, show that changes in physicians pay rates are not adequately aligned with various independent recruitment and retention events.
- Physicians in Saskatchewan receive higher pay than their Canadian counterparts. The difference does not correspond to the difference in the physician to population ratios.
- There maybe a high level of independence in the interrelation between patient satisfaction with medical services , services provided , fees paid and physician to population ratios.
- The independence of the variables listed may be compensated for by turnover .



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