afhto | D2D: DATA TO DECISIONS 6.0

Learning how to get lucky: enablers of high performing primary care teams

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On behalf of and with thanks to the members of the Association of Family Health Teams of Ontario

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Luck affects everything;
let your hook always be cast;

in the stream
where you least expect it,
there will be a fish.

Ovid

Overview

- Objective
- Study Design
- Results
- Limitations (aka learnings for next time)
- Conclusions

Objective

- Identify characteristics that primary care teams could address to help achieve better quality and/or reduce overall healthcare system costs for their patients.

Study Design

- Setting and participants:
  - Primary care sector in Ontario, population of approximately 13 Million
  - Members of the Association of Family Health Teams of Ontario (virtually all of the 184 Family Health Teams, some Nurse-Practitioner Led Clinics)
  - Serve approximately 25% of Ontario's population
- Observational study

Data

- Team-level performance data
- Voluntarily contributed to Data to Decisions (D2D)
- Data elements:
  - 4 Patient experience measures (patient surveys)
  - 4 Preventive measures (EMR)
  - 3 Healthcare system utilization measures (administrative data)
  - 25 Team and patients characteristics (online survey - 11 minutes)

Analysis

- Mixed Models analysis with repeated measures (SPSS)
  - Multiple teams: random effects
  - Repeated measures: multiple iterations
- Model structure
  - Outcomes were per capita healthcare system cost and overall quality
  - Independent variables (“factors”) were
    - Team characteristics: Patient panel size, electronic connection between hospital and primary care EMR, single-site design or not, governance type,
    - Patient characteristics: complexity, age (ie senior or not), low income
    - Clinical outcomes: quality
  - Structure informed by multivariate linear regression with single record per team
- Separate (not stratified) analysis of 25 rural and 35 urban teams

Results: significant associations with outcomes

setting	outcome	EMR-HIS integration	SAMI (complexity)	Single site	Physician board	Panel size	Seniors	Low income	Quality (overall)
Rural (25 teams)	Costs: services		857				35	4	
	Costs: settings						16	6	
	Costs: total (no institution care)						51	11	
Urban (35 teams)	Costs: services		672		- 144		10		
	Costs: settings				- 83				
	Costs: total (no institution care)		1051		- 212		18		
rural	Quality (overall)		- 36			0.0003			
urban	Quality (overall)								

X = p<0.10 for Type III Test of Fixed Effect
-X = negative relationship of parameter estimate with outcome

Results: summary

- Patient characteristics
  - Socioeconomics: Proportion of seniors more strongly related to costs than proportion of patients with low income. Both measured at COMMUNITY level.
  - Patient complexity: equivocal evidence of the impact of patient complexity on cost
- Overall quality:
  - Not related to cost, once seniors and income are considered by the model
- Team characteristics
  - Setting: Rural and urban teams are different
  - Governance: The governance structure of teams is related to cost.
  - QI activities: Engagement in QI, clinical champions, EMR maturity etc do NOT appear to be related to cost (possibly due to lack of power/measurement error)

Limitations

- Representative sample
  - missing data is not likely due to random causes
- Data standardization
  - Locally-derived data more meaningful and timely resources for improvement
  - BUT: Definitions might not be clear or consistent
- Ecologic fallacy in administrative data:
  - Administrative data are standardized, consistent and VERY easy to access
  - BUT: Population data at community level might not describe patients of the team
  - NEVERTHELESS: the data start conversations about equity

High performance: Learning, not luck

- Fertile learning environment: Solid measurement culture of 4 years, 8 iterations, 100+ teams
- Things we know but need to do more with: Quality matters. And healthcare system cost is related to characteristics of primary care patients, even more than quality
- Socioeconomic status: Cost appears to be related more strongly to seniors with low income. This is an easier place to start addressing equity than other aspects of socioeconomic status.
- Governance: How teams are governed may be important in healthcare system cost – even more so than QI activities and clinical champions

THANKS!!

Thanks!

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