



# **The Role of Health Services Research in Defining a National Agenda on Care of Children and Youth in Canada**

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# Aims

- **Describe the potential of health services research using administrative data for formulating and assessing child health care policy**
- **Reflect on the potential to improve current national reporting on physician supply**

# Evidence on physician supply and health outcomes



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## ORIGINAL ARTICLE

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### **The Relation between the Availability of Neonatal Intensive Care and Neonatal Mortality**

*David C. Goodman, M.D., Elliott S. Fisher, M.D., George A. Little, M.D.,  
Thérèse A. Stukel, Ph.D., Chiang-hua Chang, M.S., and Kenneth S. Schoendorf,  
M.D.*

## EDITORIAL

Volume 349:1665-1667    October 23, 2003    Number 17

### **Medical Care — Is More Always Better?**

*Elliott S. Fisher, M.D., M.P.H.*

# The Role of Health Services Research

- Describe patients and the healthcare services they receive
- Evaluate the relationship of those services to health outcomes
- Evaluate/roll out system level interventions to improve health outcomes

# Defining Need at the Population Level

- **Population-based surveys**
  - ▶ **NLSCY**
    - Rich data, self report health status but unlinkable to service data, difficult to cut to small regions
- **Health Administrative Data**
  - ▶ **Diabetes → NDSS**
  - ▶ **Asthma**
  - ▶ **IBD**
  - ▶ **Complex Chronic Conditions**
  - ▶ **Case mix (ACG's)**

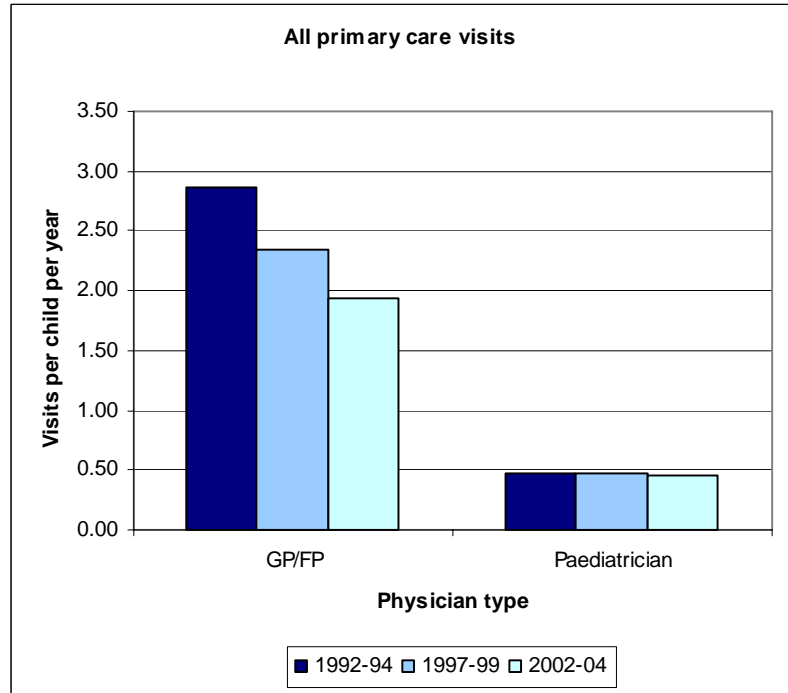
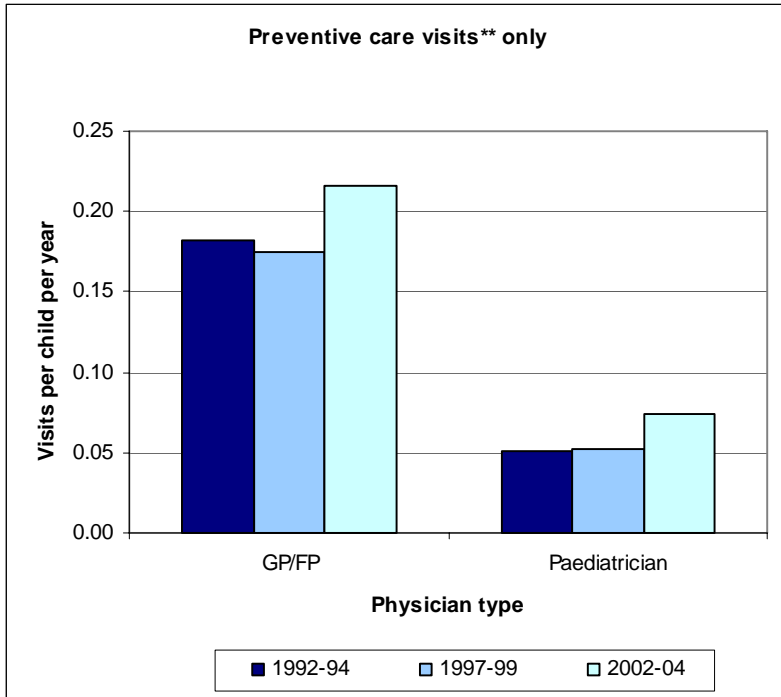
# Strength of Health administrative data

- **Define need by poor outcomes**
  - ▶ Mortality
  - ▶ Hospitalizations (esp. those considered avoidable)
  - ▶ ED visits
- **Make link between services and outcomes**
- **Geographic identifiers**
  - ▶ can be used to allocate to areas of accountability
  - ▶ link to census data (neighbourhood income, education)
  - ▶ Other: aboriginal status, immigrant
- **Basis for a agenda on disparities →EQUITY**

# Deficiencies in describing need with these data

- **Circularity in defining need by use**
  - ▶ **Obscure true barriers to access**
- **Not helpful for wait lists**
- **Relates predominantly to physician services (for now)**

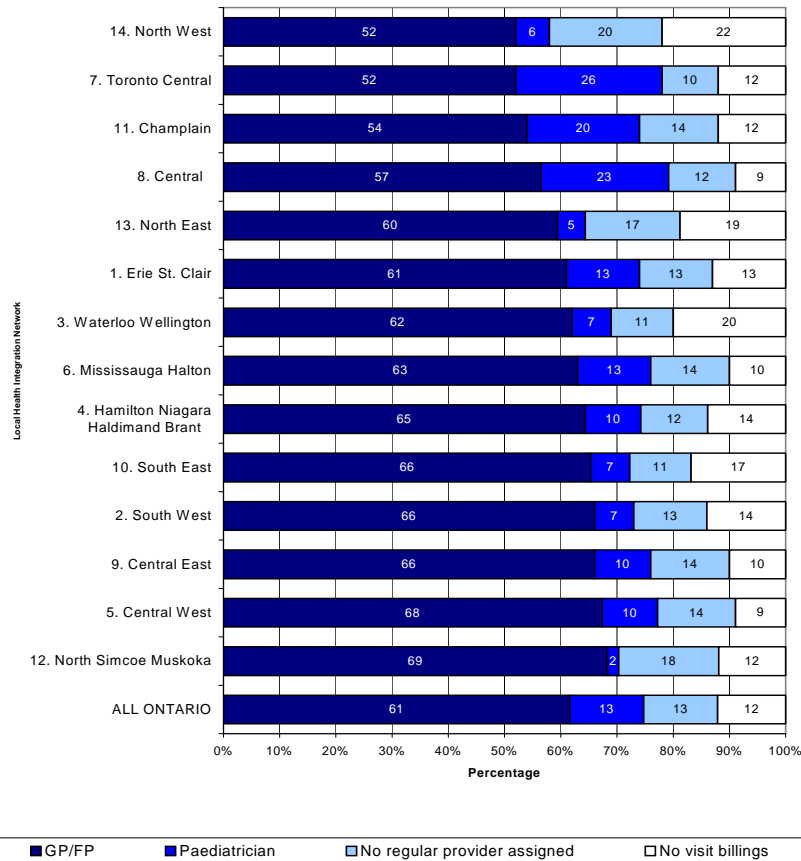
# Average number of physician visits per year made by children 0–17 years of age\*, by visit type, by physician type, in Ontario, 1992–94, 1997–99 and 2002–04



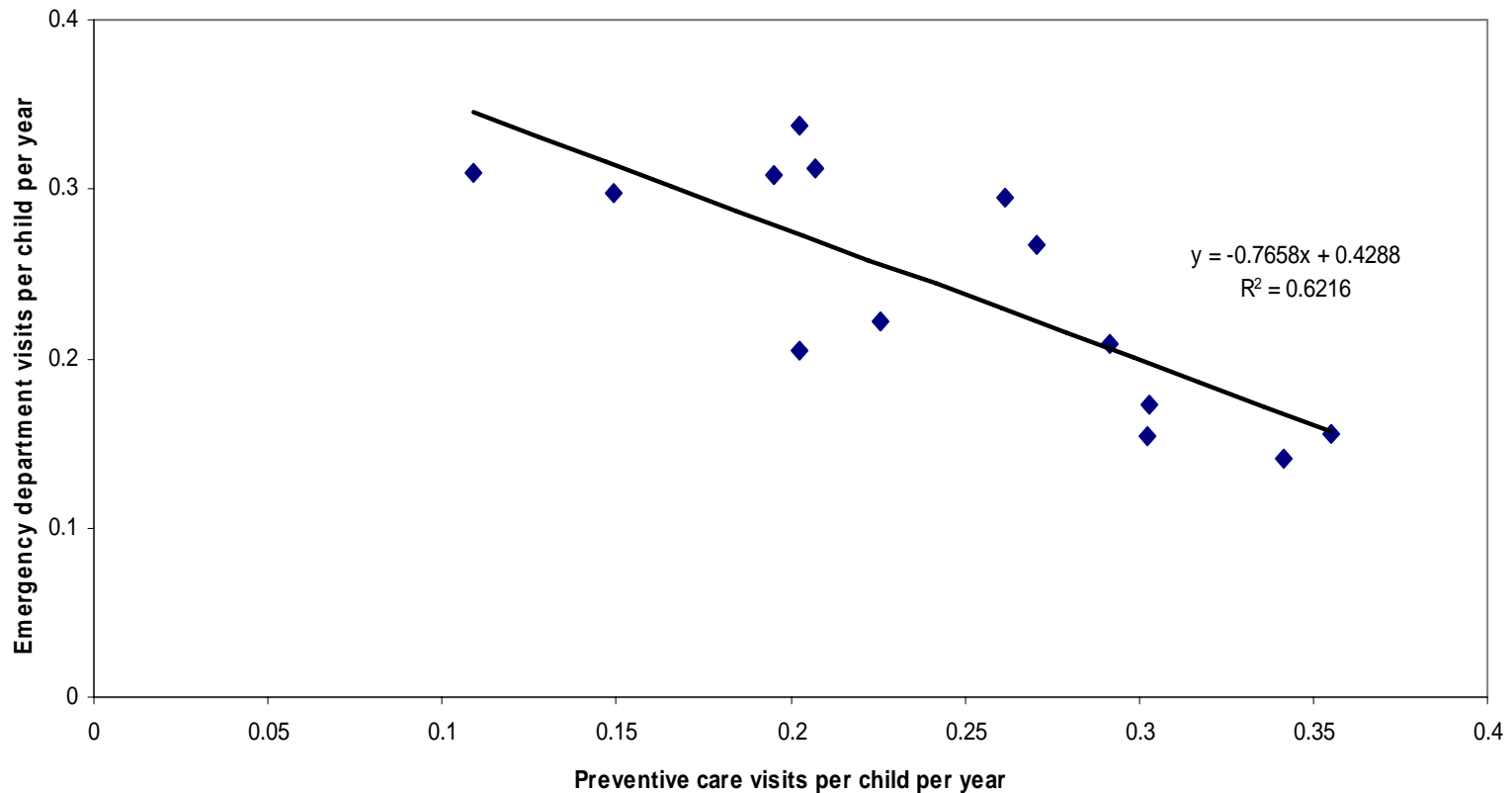
\*The study comprised three two-year time periods. Age refers to the child's age at the beginning of each period.

\*\*Preventive care visits were defined as well-baby exams, annual health exams and visits that included immunization.

# Regular primary care provider for Ontario children 0-17 years of age, by Local Health Integration Network and for the Province of Ontario, 2002-04

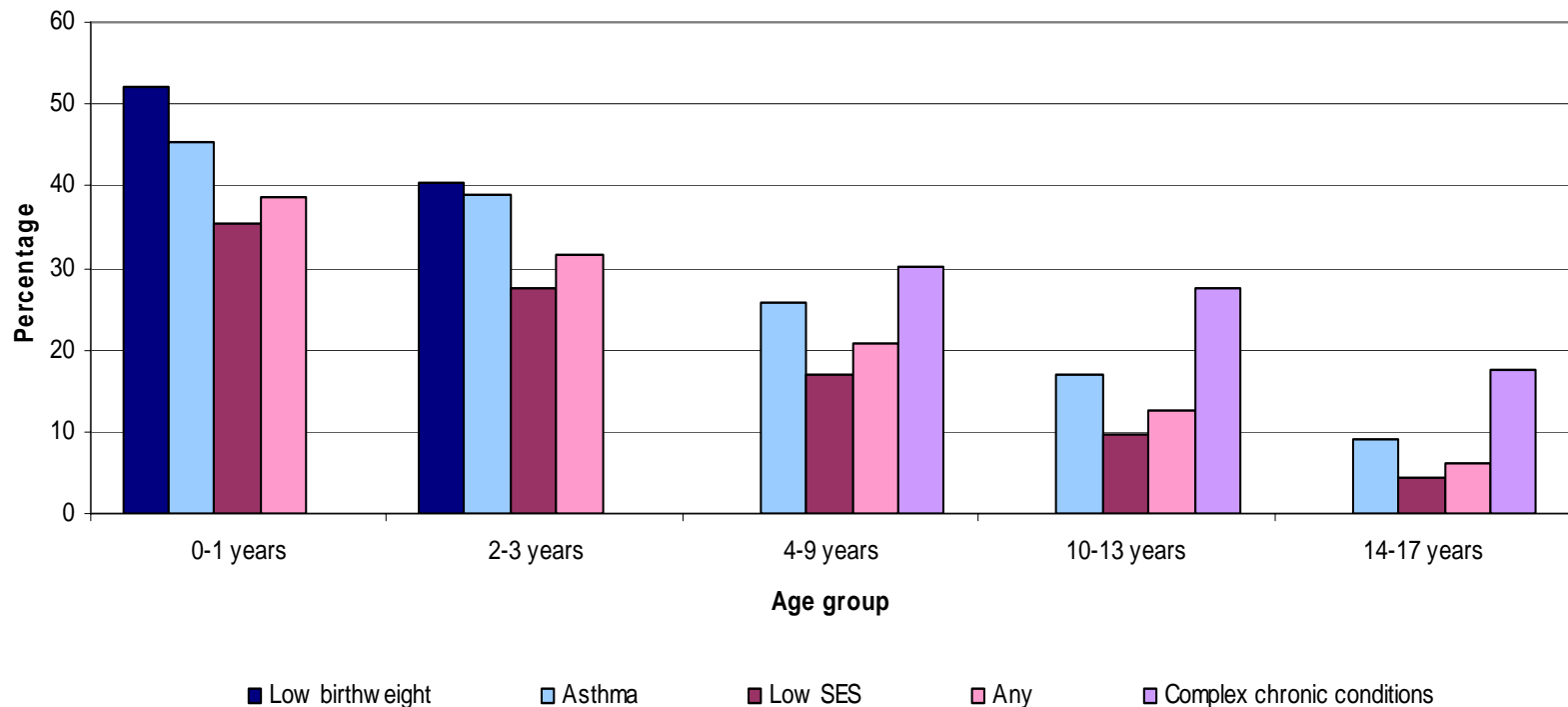


## Relationship between children's preventive care and emergency department visits across Local Health Integration Networks, in Ontario, 2002–04



Guttman A et al. Primary Care for Children in “A Primary Care Atlas for Ontario” 2006 (Jaakkimainen et al (ed))

## Percentage of children 0-17 years of age living in London, Toronto, Ottawa and Windsor with higher health risks/needs, whose regular primary care provider was a paediatrician, by age group, 2002-04



Guttmann A et al. Primary Care for Children in “A Primary Care Atlas for Ontario” 2006 (Jaakkimainen et al (ed))

# Percentage of children 0–17 years of age who visited a paediatrician, and average number of paediatrician visits per year, by Local Health Integration Network (LHIN), in Ontario, 2002–2004

LHIN Name	Percentage who visited a paediatrician				Average number of paediatrician visits per year			
	All Children 0 - 17	Low birthweight children	Children with asthma	Children with complex chronic conditions	All Children 0 - 17	Low birthweight children	Children with asthma	Children with complex chronic conditions
1 Erie St. Clair	21.8	56.7	31.4	47.1	2.2	3.3	2.5	2.5
2 South West	17.7	44.6	24.4	43.4	1.7	2.9	1.9	2.3
3 Waterloo Wellington	15.9	45.6	25.7	41.3	1.7	2.8	2.1	2.2
4 Hamilton Niagara Haldimand Brant	21.9	53.6	33.0	45.9	1.8	2.8	2.1	2.3
5 Central West	24.3	59.2	32.6	41.2	2.0	3.6	2.2	2.4
6 Mississauga Halton	26.9	67.4	35.5	39.2	2.0	3.6	2.1	2.3
7 Toronto Central	38.1	72.5	48.9	57.7	2.5	4.3	2.8	2.9
8 Central	35.0	69.7	46.2	57.2	2.7	4.5	2.9	2.9
9 Central East	23.5	60.2	31.9	51.2	2.0	3.5	2.3	2.5
10 South East	19.1	44.6	27.3	37.3	1.7	2.6	1.9	2.4
11 Champlain	29.4	62.0	37.8	50.2	2.1	3.6	2.2	2.9
12 North Simcoe Muskoka	13.0	38.0	19.7	35.5	1.2	1.7	1.4	2.1
13 North East	14.8	39.9	22.6	37.3	1.5	2.0	1.8	2.4
14 North West	15.0	41.0	24.4	39.1	1.4	1.7	1.6	2.2

## **Making the link between access to service and outcomes by patient population**

- **We know that access to care relates to geography, sociodemographic characteristics**
- **How does that impact outcomes**
  - ▶ **Immunization rates and SES**
  - ▶ **But surprising results in immigrants**
- **What do we do about it?**

# Agenda

- **Where are disparities in care the most evident?**
  - ▶ **Very sick, very remote etc etc**
- **Which disparities have important health outcomes?**
- **For which ones do we have effective strategies?**

# Current nationally reported data sources on Physician Supply

- **National Physician database**
  - ▶ Derived from physician claims
  - ▶ Data sent to CIHI from each Ministry of health
  - ▶ FTE's calculated
- **Scott's Medical Database**
  - ▶ Derived from physician self-report, provincial college of physician and RCPSC data

# Comparison of Pediatrician Supply/Population by Database

	NL	PEI	NS	NB	QU	ON	MB	SK	AB	BC
1.	8	7	7	4	7	7	9	4	7	6
2.	4	3	2	3	6	6	8	3	6	4

1. Scott Medical Directory
2. NPDB

# Issues with current reporting of National Physician database

- ▶ **APP physicians excluded**
  - Likely because FTE's difficult to compute
- ▶ **Physician billing specialty very limited – except for paediatric cardiology and surgery no paediatric SS**
  - Many paediatric subspecialists bill as their subspecialty (i.e Respiriology)
  - Paed cardiology is lumped under internal medicine

# Cleaning this data up to be USEFUL

- Supplement the data with data being collected by the PAHC's
  - ▶ Would capture almost all paediatric subspecialists
  - ▶ Could ensure they are reported either under the “paediatric” category or could lobby for a paediatric subspecialist category
  - ▶ Could use clinical FTE
- Deal with both APP and misclassification issues
- Could easily have these numbers/FTE's reported on denominators of children and youth

# Advantages

- **Existent data infrastructure/reporting mechanism**
- **Captures community paediatricians**
- **Allows comparisons of supply with other specialty groups as well as with FP/GP's**
  - ▶ **Overlapping functions**
  - ▶ **Compare supply issues**
- **Benchmark against other jurisdictions internationally**
- **Be at the table**
  - ▶ **New datasources → Allied health professionals**

# Scott's Directory

- **Datafields exist for paediatric subspecialists but current reporting is paediatrics or the subspecialty**
- **Unclear where the paed SS are**
- **Don't have FTE's**
- **Have data on age, training, years in practice**

# Cleaning up Scott's Directory

- **By combining data fields (self reported specialty and certifications) can likely get to paediatric subspecialists**
- **Ensure they are properly classified**
- **Population denominators**

## **Finer levels of analysis possible in some provinces**

- **Capacity to combine these data sources**
  - ▶ **self reported specialty/subspecialty with billing information/ physician demographics**
  - ▶ **Scopes of practice**

# Conclusions

- **Research methods exist to use provincial and national data to define needs**
- **Capacity to link service provision to individual children and in some cases outcomes**
- **Potential to explore natural experiments in service delivery to generate evidence about best practices**

## Actionable Items

- **Clean up the physician supply data and make existing national reporting more relevant for children and youth**
- **Define which patient populations we serve and what the scopes of practice are**
- **Articulate the role of the paediatrician in access to appropriate care**
- **Define at what level policy can be made for these children and who makes it**