



Pediatric Emergency Research Canada





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Pediatric Emergency Medicine (1970's – 80's)

- Emerging specialty
- 100% clinical
- Few studies
- Small single-center trials (risk of publication bias)



PERC – the beginning (1995)

Multi-centre retrospective study of children with minor head injury & use of CT scan

- 4 **Single site impractical**
- 4 **large numbers for rare outcomes**
- 4 **No funding, Pooled resources**
- 4 **Tertiary peds hospitals across Canada**
- 4 **Network became PERC**

PERC – (2000) – Formal structure

- CIHR Meeting Grant
- Based on PICNIC, CCCTG
- Governance
- Executive Structure
- Goals



Goals of PERC:

- **To create new knowledge through research involving clinical and epidemiological studies in PEM**
- **To mentor new investigators and fellows in developing research projects**

Goals of PERC:

- **To enhance the image of PEM as a credible academic discipline with its own research agenda**
- **To develop cohesiveness and communication between centers involved in the practice of PEM**

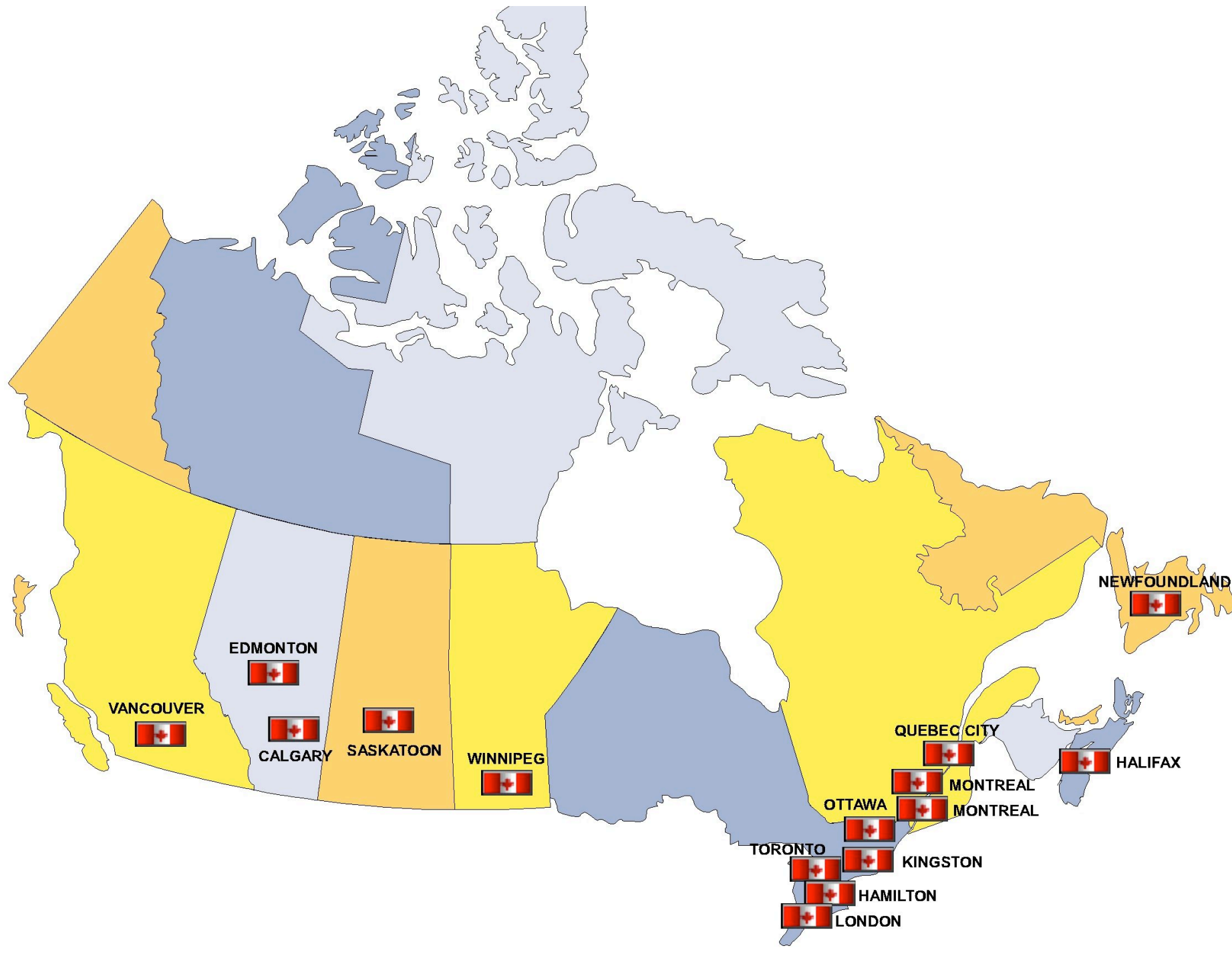
PERC Annual Meeting

- Discuss new multicenter projects
- Study team meetings
- Present finished studies
- Combine work and fun



PERC membership

- **15 Canadian PEDs in 14 cities**
 - 4 ~ 550,000 ED visits per year
- **Any health care provider or researcher involved in the delivery of care for children and youth in PEM**
- **> 100 active members**
 - 4 emergency physicians, pediatricians, nurses, epidemiologists, trainees, etc.



PERC: getting established

(Project-by-project funding)

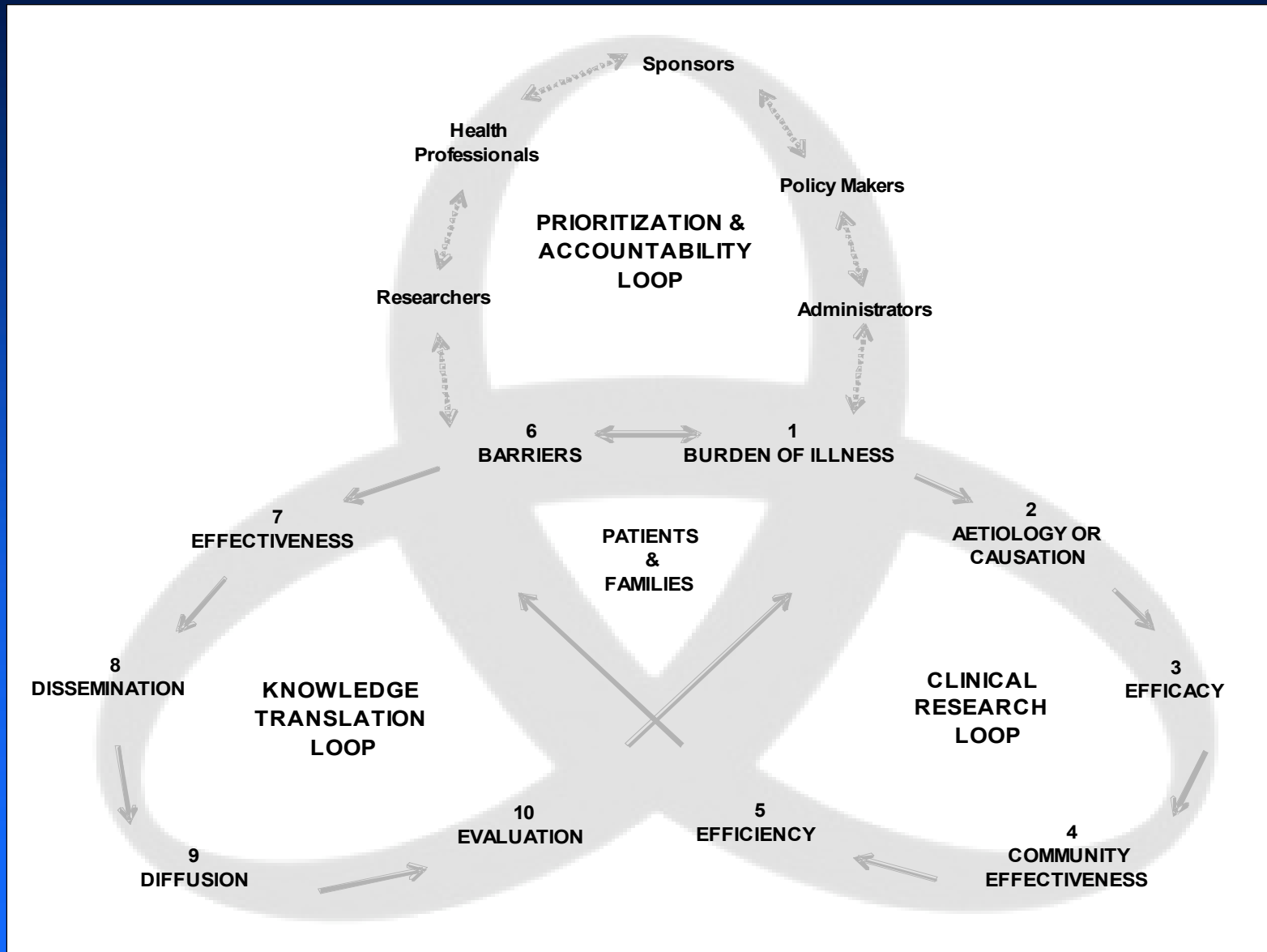
- **Prospective cohort studies**
 - 4 **Ottawa Ankle Rule Validation**
 - 4 **Ottawa Knee Rule Validation**
 - 4 **CT Head Decision Rule (CIHR - CMAJ)**
- **RCT**
 - 4 **Steroids for Mild Croup (CIHR – NEJM)**
 - 4 **Steroids for Bronchiolitis (CIHR – NEJM)**

PI Initiated - Coalition of the willing

CIHR Team Grant in PEM **(2006)**

- >200 applicants, 19 funded, Rank 5
- 5 years, \$4.2 Million
- 7 projects
- Mix of PEM and KT researchers
- Allowed more fixed site reps and site coordinators (site matching \$)
- Engaged entire PEM community

Central Organizing Paradigm



PERC: Current & Pending Projects

>20 trials currently underway

- 4 Systematic Reviews**
- 4 Clinical Trials – RCT**
- 4 Decision Rules**
- 4 Knowledge Translation - cRCT**
- 4 New initiatives**

What works: Keys to our success

- Tremendous goodwill to work together
 - 4 Develop cohesiveness
- CIHR - Meeting Grant / Team Grant
- Matched funds – team grant
- Pool methods and expertise across the country
 - 4 Health economics/systematic review
- Sharing of best practices
 - 4 PIs and coordinators
 - 4 SUPPORT volunteers

What works:

- Raising research culture through “healthy competition”
- Shared mentorship of junior investigators and trainees
- Collaborative, collegial leadership
- No fixed priorities – opportunity based

Challenges

- **Maintaining infrastructure funding**
- **REB – Multiple applications**
- **Contracts – Increased complexity and number**
- **No standardized, web-based data management program**

Challenges

- **Prioritizing projects competing for the same patient population**
- **Encouraging next generation grant writers**
- **Avoiding overwhelming sites**

International Networking

PERC-PECARN Links

Deer Valley 2007



- Head Injury Rules
- Bronchiolitis
- Gastroenteritis





Pediatric Emergency Research Networks (PERN)

**A global umbrella
network of pediatric
emergency research
networks**

Rationale

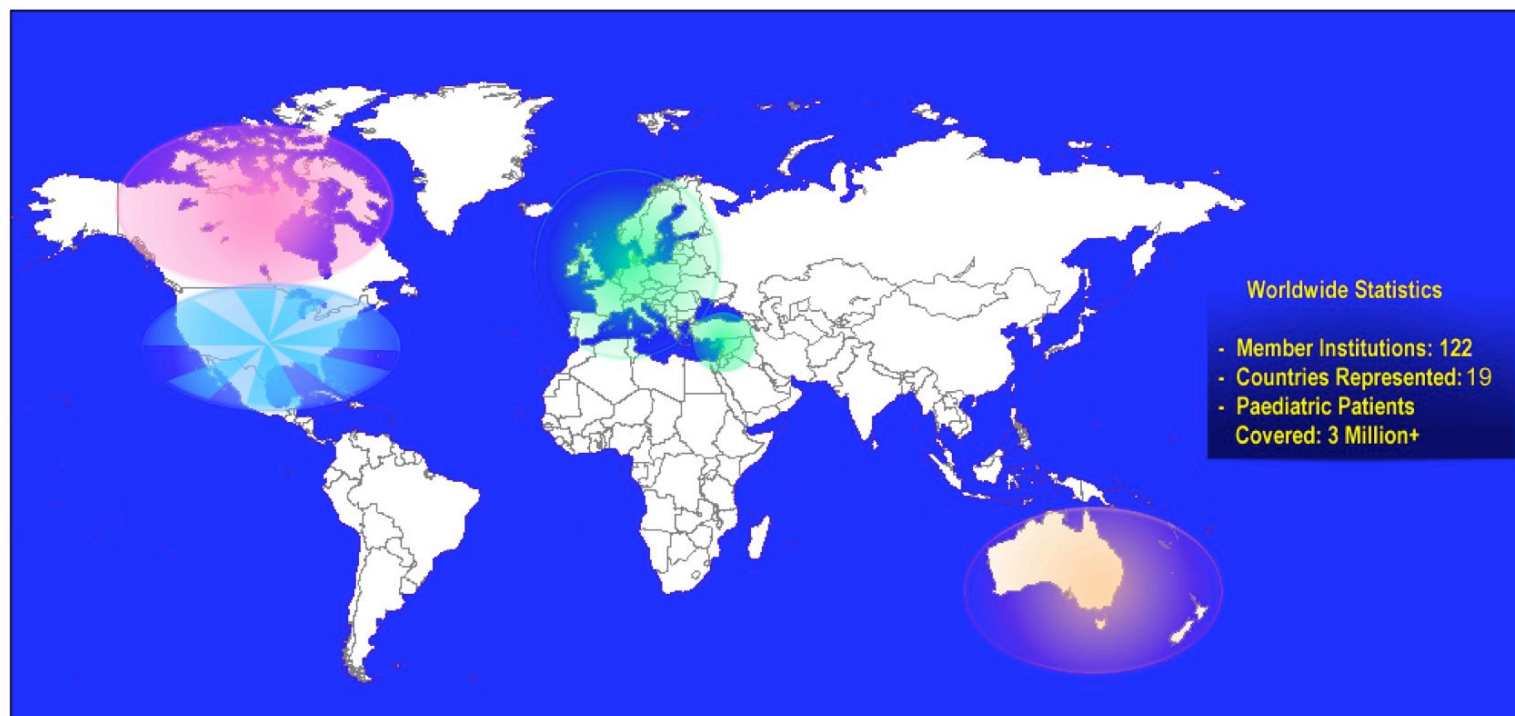
- Last 20 years seen growth in high quality research much of it emanating from PEM research networks
 - A unique opportunity for five PEM research networks to meet in Amsterdam in October, 2009
- 4 STaR Child Health



Objectives

- **Learn about each network's missions, goals and infrastructure**
- **Share about the important contributions in new knowledge made by each network**
- **Discuss “best practices” by each network**
- **Explore the potential for a collaborative research project**

Pediatric Emergency Research Networks



Organisation	PEMCRC	PECARN	PERC	PREDICT	REPEM
Established	1990s	2001	1995	2004	2006
Location	USA	USA	Canada	Australia & New Zealand	Europe
Organisational Affiliations	AAP	EMSC/ HRSA/ MCHB	CIHR	RACP/ ACEM	EuSEM
Member Institutions	52	22	15	13	20
Paediatric Population Accessible	1450000	① 950000	555000	400000	800000
Website	www.pemcrc.org	www.pecarn.org	www.perc-canada.ca	http://www.pems.org.au/ModCoreFrontEnd/template.asp?PageID=134	http://www.pemdatabase.org/REPEM-members.html

① PEMCRC and PECARN have substantial overlap in populations accessed (up to 2/3)

Research project – Stuart Dalziel

- **H1N1 – example of global movement of disease**
- **Unfunded study, data management of Baylor College of Medicine and Texas Children's Hospital**
- **Identify historical and clinical features at ED presentation associated with severe H1N1 outcome in children presenting with ILI**
- **Case-control**

Future

- **Treatment of septic shock**
- **Focus on KT**

Final Thoughts

- For many the most satisfying part of our academic careers
- Only obtained through committed collegial leadership
- Best hope at both answering the important questions and implementing the results
- Challenges (infrastructure, contracts, REB, career dev) can be