



UNIVERSITY OF CALGARY
CUMMING SCHOOL OF MEDICINE

Pediatric Anesthesia and the Value of Citizenship

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Learning Objectives: At the end of this session, participants will be able to...

- appraise the varied citizenship contributions that pediatric anesthesiologists have made to their institution, their specialty, and to society as a whole,
- reflect on the personal professional and health implications of citizenship contribution, and
- evaluate the place of citizenship in their own careers.

Conflicts of Interest

- None to declare

Pierre Limoges

(1945 – 2003)

- The ultimate role model for excellent clinical care and citizenship contributions:
 - President of the Canadian Anesthesiologists' Society
 - President of the Pediatric Section of the CAS
 - President of the Oral Examination Board of the RCPSC (Anesthesia)
 - Member of the National Blood Safety Council



Citizenship

- “The status of a person recognized under the custom or law as being a legal member of a sovereign state or part of a nation”
- “A bundle of rights – primarily, political participation in the life of the community, the right to vote, and the right to receive certain protection from the community, as well as obligations”
- “The quality of an individual's response to membership in a community”

Professional Citizenship

- Our primary function is to provide safe, comfortable, efficient and family-centered anesthesia for children.

but:

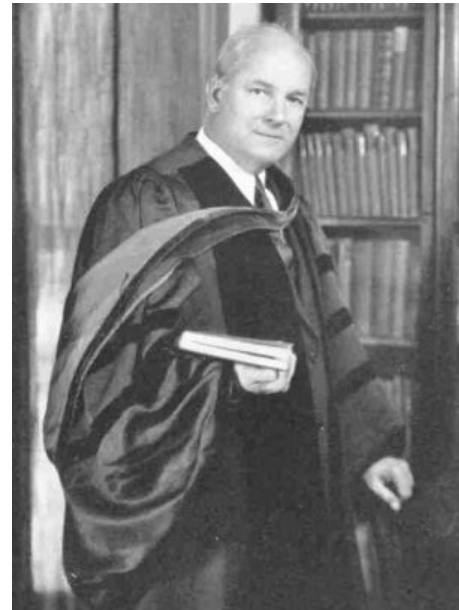
- We can offer much more to our patients, the health care system, our specialty, and to society;

and:

- In the process, enhance our professional and personal satisfaction...

Rights and Duties...

“Ask not what your country can do for you – ask what you can do for your country” (JFK 1961)



George St John

Why bother with citizenship?

- Promotion and protection of our specialty and sub-specialty
- Engagement and value to the medical profession at large
- Social contract
- Career satisfaction:
 - “Variety’s the very spice of life, that gives it all its flavour.” (William Cowper, 1785)
 - Prevention of burnout
 - An evolving career

Social contract based on expectations

Society's Expectation of Medicine: Medicine's Expectations of Society:

The services of the healer, assured competence, altruistic service, morality and integrity, accountability, transparency, objective advice, and promotion of the public good.

Trust, autonomy, self-regulation, a health care system that is value-driven and adequately funded, participation in public policy, shared responsibility for health, a monopoly, and both non-financial and financial rewards.

Burnout in Anesthesiologists

- The most relevant factors in job satisfaction are worker autonomy, control of the working environment, recognition of our value, professional relationships, leadership and organisational justice.
- Personal wellness should also be nurtured, as a satisfactory work-life balance and an adequate social support network might act as a buffer for dissatisfaction and burnout.

(Rama-Maceiros P, Eur J Anaesthesiol 2012)

Pediatric Anesthesia: the clinical mix

- Surgery and Perioperative Medicine
- Preoperative Evaluation
- Out of OR procedures
- Acute Pain
- Chronic Pain
- Palliative Care
- Resuscitation and Transport
- Critical Care

Pediatric Anesthesia: the clinical mix

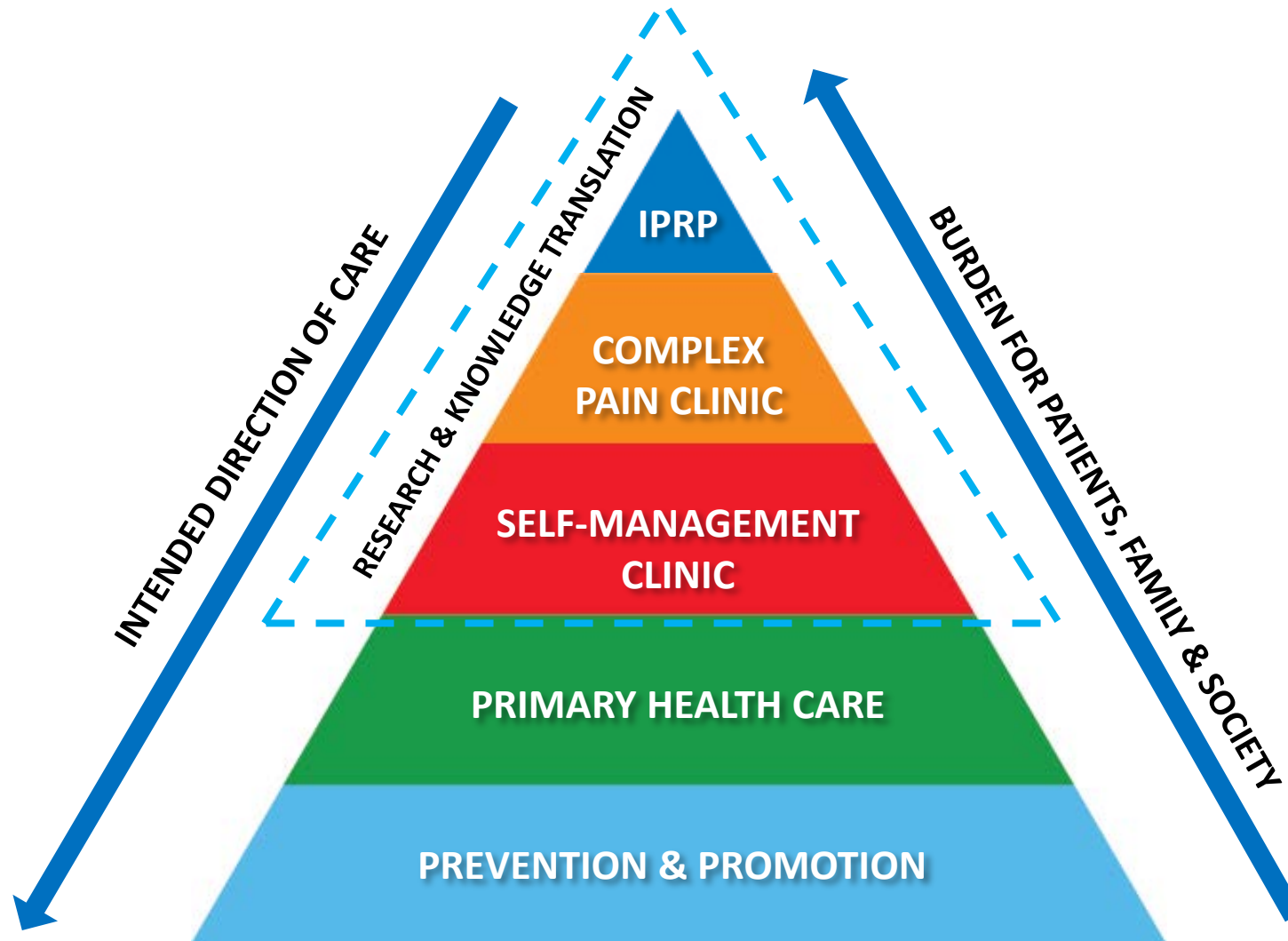
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Chronic Pain in Teenagers

- 5 to 8% of teenagers have chronic pain severe enough that it affects schoolwork, social development and physical activity
- Based on Canadian Census 2011, this translates to 143,000 teens with chronic pain
- About 3% of children with severe chronic pain receive the pain services they need



Vi Riddell Children's Pain & Rehabilitation Centre



Vi Riddell Children's Pain & Rehabilitation Centre: Intensive Pain Rehabilitation Program (IPRP)

- Multidisciplinary team approach to teen chronic pain
- Focus on self-management skills
- 6 week, 5/7 intensive day program
- 4 cohorts per year
- To date, 12 cohorts have completed the program

The Vi Riddell IPRP: Outcomes

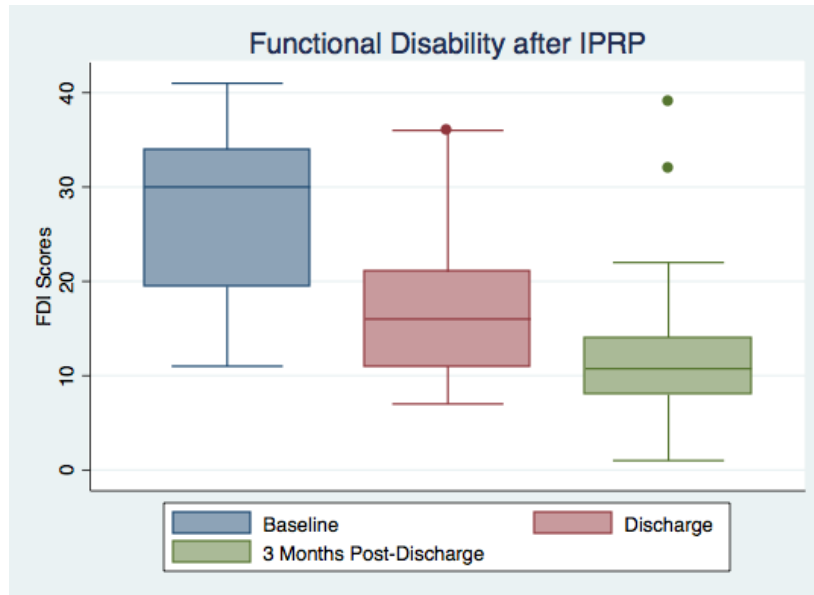


Figure 1. FDI functional disability scores differed between time-points $F(2, 34) = 23.31, P < 0.001$). Post hoc tests revealed that baseline scores differed from discharge ($P < 0.001$) and 3 month post-discharge scores ($P < 0.001$)

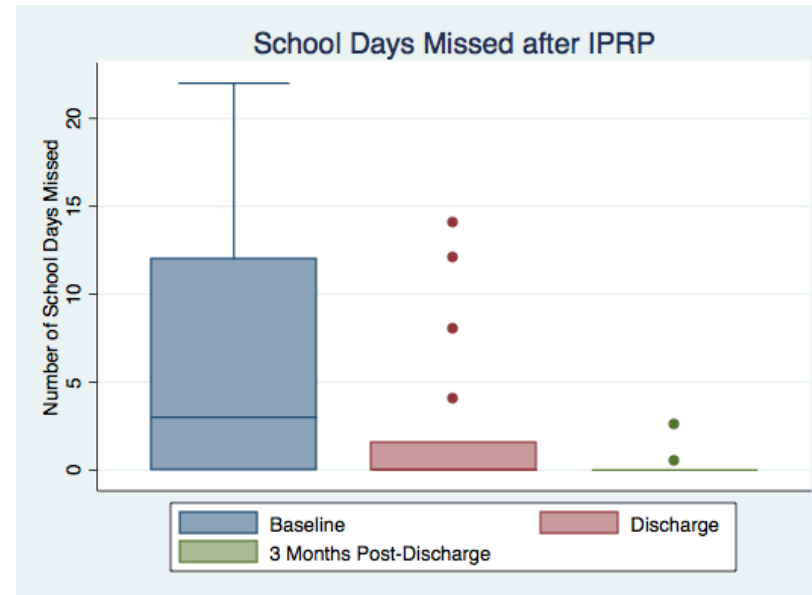


Figure 5. School days missed differed between time-points $F(1.28, 23.07) = 11.41, P = 0.001$). Post hoc tests revealed that baseline scores differed from discharge ($P = 0.004$) and 3 month post-discharge scores ($P = 0.007$)

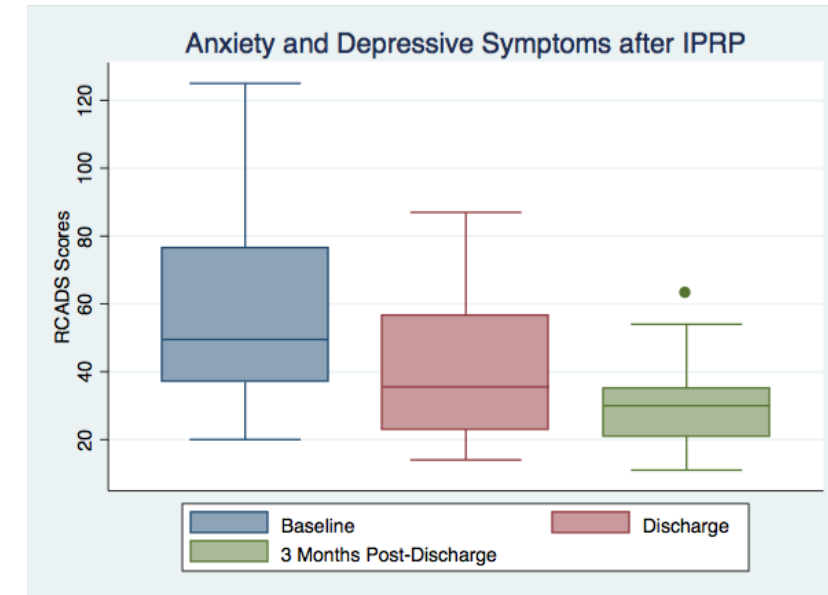


Figure 4. RCADS Anxiety and Depressive Symptoms differed between time-points $F(1.64, 21.29) = 14.76, P < 0.001$). Post hoc tests revealed that baseline scores differed from discharge ($P = 0.001$) and 3 month post-discharge scores ($P = 0.003$)

Pediatric Critical Care: 1930s – 1950s



Early Pediatric Critical Care Units

- | | | |
|--------|----------------------|------------------|
| • 1955 | Göteborg, Sweden | Haglund |
| • 1961 | Stockholm, Sweden | Feychting |
| • 1961 | GOSH, London, UK | Glover |
| • 1963 | Paris, France | Joly, Huault |
| • 1963 | Melbourne, Australia | McDonald, Stocks |
| • 1963 | Adelaide, Australia | Allen, Stevens |
| • 1964 | Liverpool, UK | Rees |
| • 1967 | CHOP, Philadelphia | Downes |
| • 1968 | Sick Kids, Toronto | Conn |

Sick Kids PICU, Toronto 1985

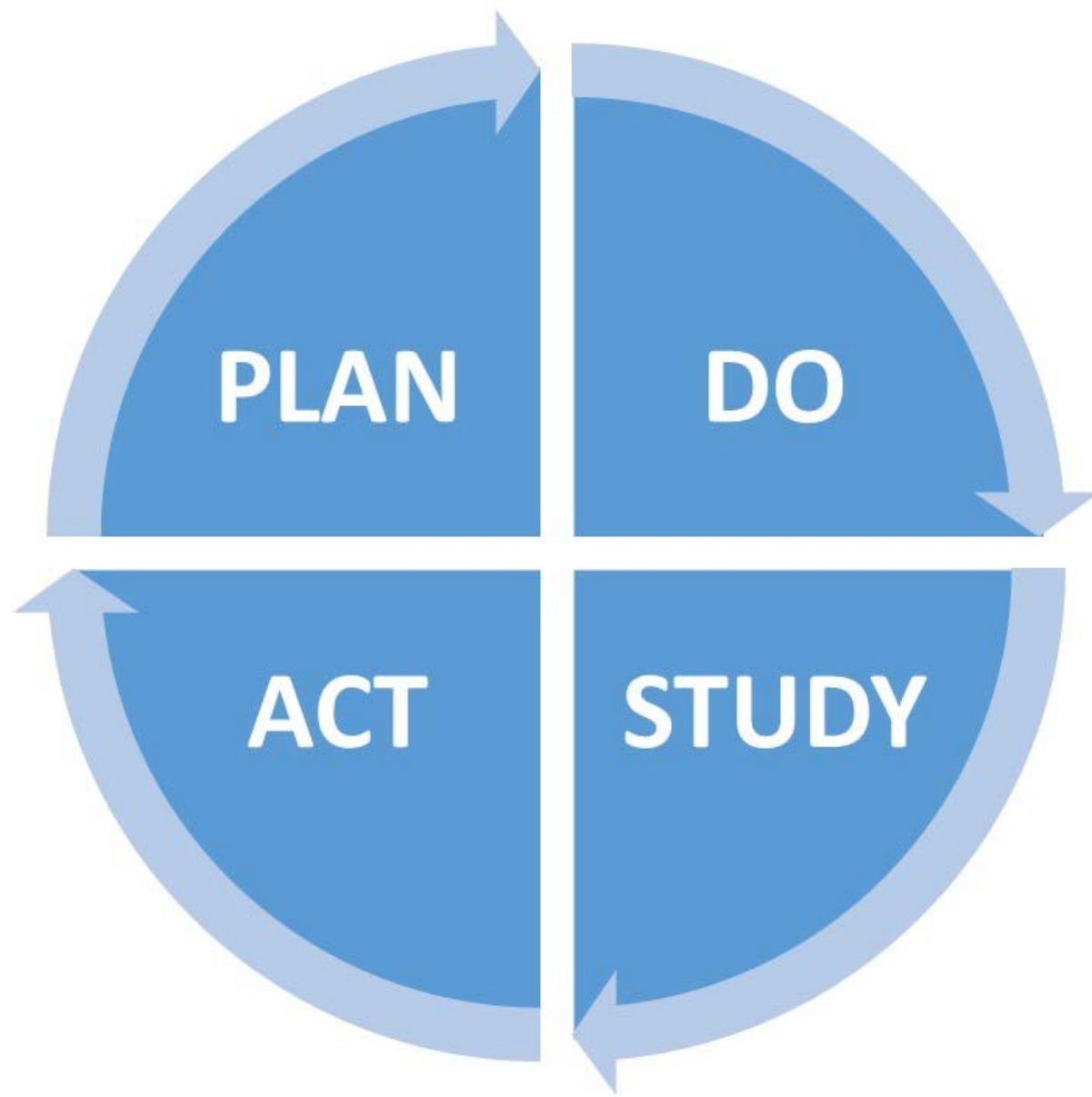


Sick Kids PICU, Toronto 1985



Improving quality and outcomes

- Formal Quality Improvement activities
- New technology (e.g. ultrasound)
- Innovation (e.g. Archie Brain and the LMA)
- Education across the continuum:
 - Medical School to Retirement
- Research and Knowledge Translation
- Simulation



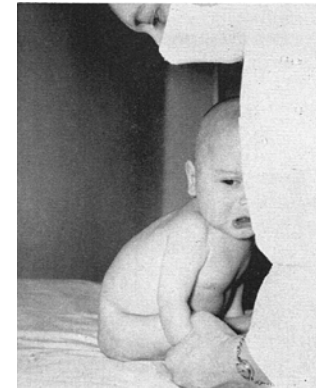
New Technology - Ultrasound

- To set up a program, there are several requirements:
 - Strong program leadership
 - Well trained anesthesiologists
 - Enthusiastic role models
 - Support for learners, young and old
 - Buy-in from the team (that means surgeons!)
 - Resources for equipment purchase and maintenance



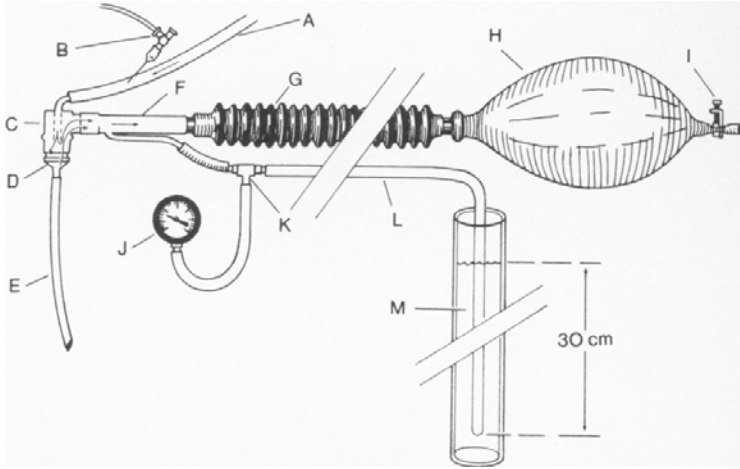
Innovation and Dr. Frank Ruston

- Hamilton, Ontario
- First published series on pediatric epidural anesthesia
- 77 infants and young children
- Pyloric stenosis, intussusception, volvulus, appendicitis
- Many patients were moribund
- No anesthetic mortality or long-term morbidity



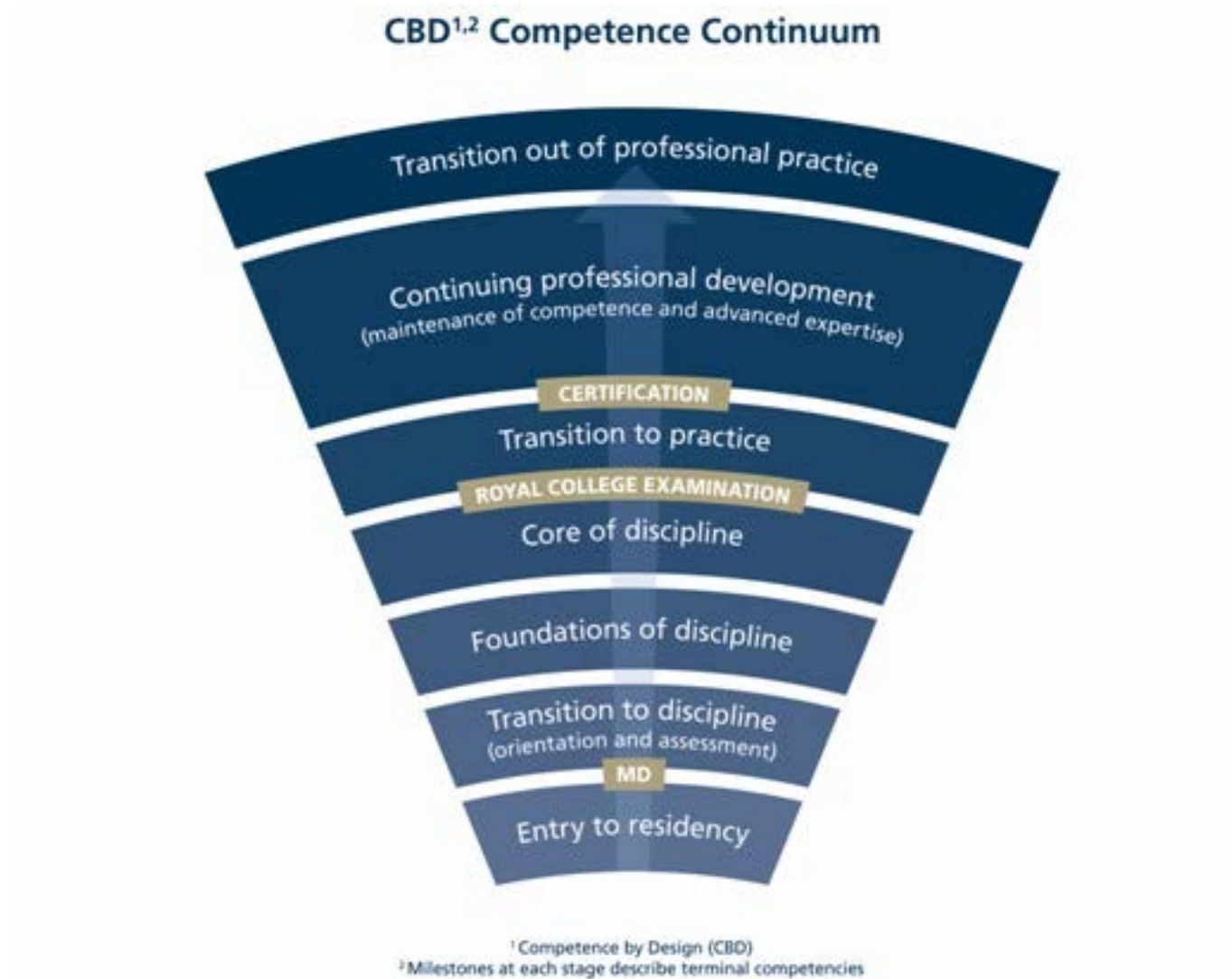
(Ruston F, Can Anaesth Soc J 1954)

Innovation in the NICU – Invention of CPAP



(Gregory GA, N Engl J Med 1971)

Education from medical school to retirement



Conferences

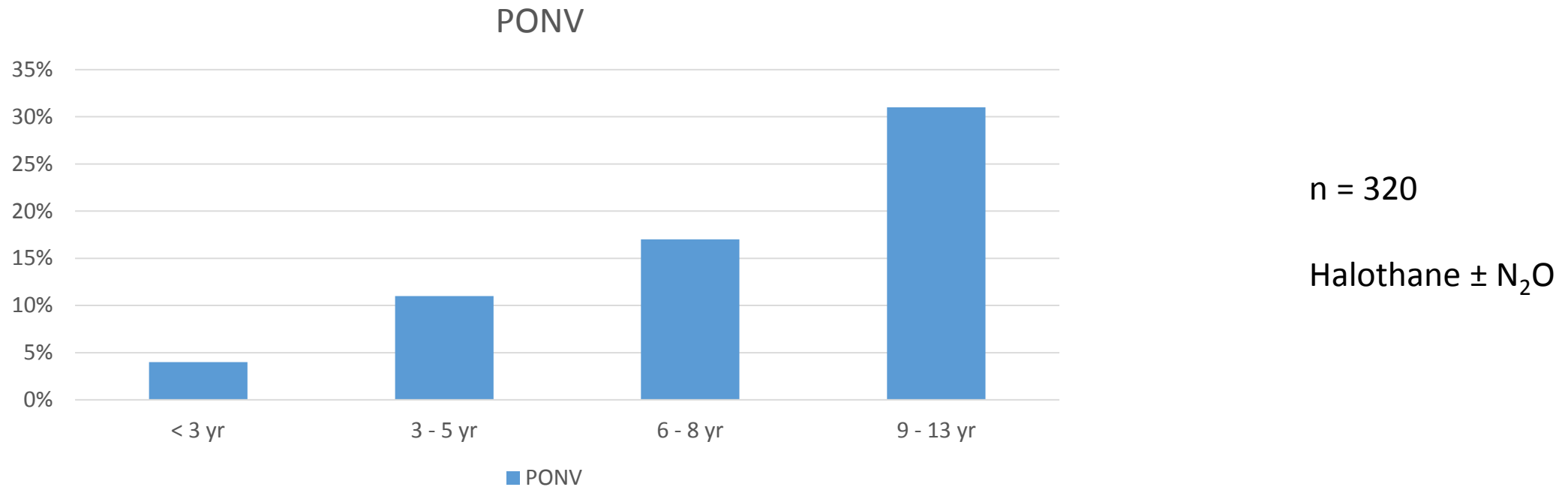


- Core material
- Expert educators
- Alternative learning tools
- Collegiality
- Networking
- The hallway consult
- Present your research
- Global interaction
- Interaction with other specialties
- Pre or post conference events
- Recruitment
- Exhibits
- Sightseeing and relaxation
- Spouse/guest activities
- Business/committee meetings

Research and Knowledge Translation: PONV as an example



Myringotomy and effect of age on PONV



(Splinter WM, Can J Anesth 1995)

Strabismus and PONV

| | Low-dose Ondansetron Plus Dexamethasone | High-dose Ondansetron |
|-----------------|--|-----------------------|
| Vomiting | | |
| In-hospital | 1% | 7%* |
| PACU | 0% | 3% |
| DCSU | 1% | 4% |
| Out-of-hospital | 9% | 24%* |
| Day of surgery | 7% | 14% |
| Next Day | 5% | 15%* |
| Overall | 9% | 28%† |

PACU = post-anesthetic care unit; DSCU = day care surgical unit.

* $P < 0.05$.

† $P < 0.001$.

n = 200

Halothane + N₂O

(Splinter WM, Anesthesiology 1998)

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Simulation



Simulation

- Valuable across the educational continuum
- Ideal for multi-disciplinary education
- Addresses multiple CanMEDS roles
- Can be used for assessment
- Can be delivered in a specific Simulation Centre, or in the actual workplace of participants

Perioperative Crisis Management Course (POCM)

- All day course at the Alberta Children's Hospital
- OR nurses, PACU nurses, anesthesiologists, surgeons, and respiratory therapists
- Geared towards staff physicians and fellows
- Location: in an operating room on a weekend day
- Four scenarios enacted with extensive debriefing
- Major focus on team dynamics and CanMEDS roles
- Section 3 credits (RCPSC)

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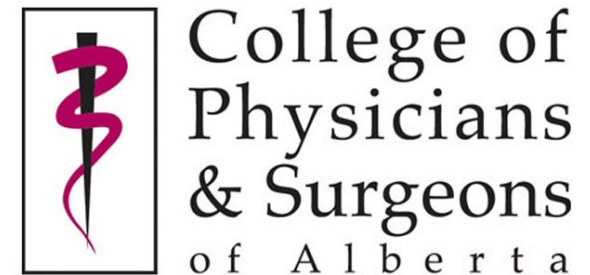
Governance – is it important?

“You’ll never influence anything if you are tied to your anaesthetic machine with a restrictive umbilical cord”

(The late Peter Baskett, Past President, Association of Anaesthetists of Great Britain and Ireland)



Governance Bodies



Governance Modes

- Fiduciary:
 - Legal responsibilities of oversight and stewardship of an organization
- Strategic:
 - Major decisions about resources, programs and services
- Generative:
 - Deeper inquiry, exploring root causes, values, optional courses and new ideas
 - Engages and challenges trustees intellectually

Mentorship



Who needs a mentor?

- Undergraduates
- Medical students
- Residents
- Fellows
- Newly appointed faculty and staff
- Anesthesiologists in difficulty
- Maybe all of us...

New children's hospital design



Hospital Planning: Advocacy from different centers

- Family-centered care
- Induction rooms
- Perioperative patient flow
- Appropriate space for anesthesiologists to participate in academic and citizenship activities

Thanks, Ted!



Global Health

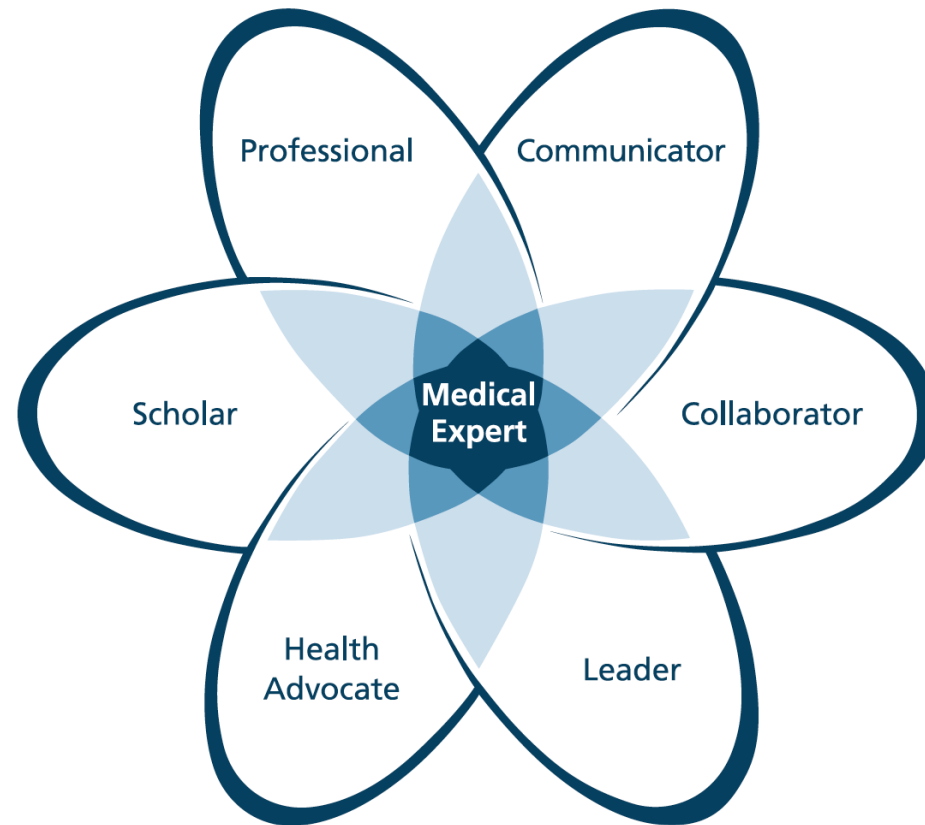


Resurge International (resurge.org)

- Founded in 1969 as Interplast
- To date over 100,000 reconstructive surgeries have been performed
- Now over 80 percent of surgeries are performed by developing world surgeons
- Free anesthesia textbook
- Missions:
 - Surgical teams
 - Visiting educator







CANMEDS

Barriers to citizenship activity

- Personal motivation (life balance, economic, time)
- Clinical production pressure
- Staff shortages
- Funding models
- Value not recognized by institutions, clinical or academic

Threats

If we do not engage in citizenship we will face several risks:

- Loss of autonomy and influence
- Increased burnout and loss of professional satisfaction
- Relegation to a purely technical role
- Possible replacement with other health care providers

Polling Question 1

- How important do you think citizenship activities are?

- A] Crucially important
- B] Fairly important
- C] Slightly important
- D] Of no importance at all

Polling Question 2

- Who should participate in citizenship activities?
 - A] Only those with funded academic positions
 - B] All anesthesiologists
 - C] Only those with protected time, with or without funding
 - D] Only those with formal leadership positions

Polling Question 3

- Over the next 3 – 5 years do you propose doing:

- A] More citizenship work
- B] About the same amount of citizenship work
- C] Less citizenship work
- D] No citizenship work at all

Kudos and a Challenge...

- Congratulations to the sub-specialty and all anesthesiologists for your citizenship achievements over many decades...
- The challenge is to keep the momentum going...



“The Elder Sister”

W. Bouguereau

1869