IMPLEMENTATION OF A PEDIATRIC TO ADULT ASTHMA TRANSITION PATHWAY
FINANCIAL INTEREST DISCLOSURE
(OVER THE PAST 24 MONTHS)
RODEL PADUA, RRT

• I have no conflict of interest.
ASTHMA EDUCATION

• Started at Calgary COPD and Asthma Program 2007

• At that time there was no formalized pathway for pediatric patients as they enter adult centered care.

• http://www.youtube.com/watch?v=zG2DVoRP86g
TRANSITION

• “The purposeful, planned movement of adolescents and young adults with chronic physical and medical conditions from child centered to adult-oriented health care systems” - Blum et al 2004

• A structured, coordinated program of transitional care has been shown to improve teen and parent satisfaction with overall care – Shaw 2004

• Transition is a process, not an event
Transition to Adulthood: Delays and Unmet Needs among Adolescents and Young Adults with Asthma

evaluated the effect of adolescent (age, 12-17 years; n = 1539) versus young adult age (age, 18-24 years; N = 833)

“We could find no studies that focus on the unmet needs and access to care for youth with asthma as they transition to adulthood. “
Delays and unmet needs for care caused by financial reasons are significantly higher for young adults than they are for adolescents with asthma.

This lack of attention is striking for 2 reasons:
  1: Asthma is among the most prevalent serious chronic conditions.

  2: The need for ongoing primary care and asthma-specific monitoring is highlighted in current practice guidelines.
Examined available transition services for pediatric diabetes patients in England

“Young people and their families exhibiting high levels of cultural continuity experience better outcomes on a range of measures”

Conclusions included:

Development and evaluation of a model of transition through a randomized controlled trial is needed.
DON’T GROW UP!
IT’S A TRAP!
FROM GINA

• Adolescents may have some unique difficulties regarding adherence

• Education must be personalized

• Support may be required to maintain positive behavioral change

• Follow up consultations should take place at regular intervals
FROM CANADIAN ASTHMA GUIDELINES

- Asthma education is an essential component of asthma care.

- Poor asthma control is not usually due to a lack of efficacy of the medication, but is more often related to suboptimal use of medication or aggravating factors.
• Asthma control should be addressed regularly

• Physician-patient partnerships that include individuals as managers of their own health care may enhance adherence

• This partnership is extended to include certified asthma and respiratory educators where resources permit
CCAP

- Calgary COPD & Asthma Program

- CCAP is a comprehensive program to improve care and teach self-management to adults with asthma, COPD (chronic bronchitis, emphysema), chronic cough and smokers at risk.

Education and a breathing test (spirometry) are offered in a one-on-one setting at 8 clinics in Calgary area.
CCAP

- Must be 16 years of age or older.

Service providers
- Certified Respiratory Educators

Service partners
- Living Well Program, Community Pediatric Asthma Services

Service locations
- In outpatient respiratory clinics as well as various community locations.
In the Calgary Health Zone, CRE’s in the well-established Calgary COPD and Asthma Program (CCAP) work with respirologists and family physicians in the diagnosis and management of asthma and COPD.

A pediatric-to-adult asthma transition program that is able to utilize existing resources within CCAP, including CRE’s may reduce duplication of services, minimize costs, and enhance efficiency of patient care in the Calgary Health Region.
CURRENTLY

- There are no formally studied pediatric to adult asthma transition pathways in Canada.

- We asked the question:
  - Can a pediatric to adult asthma transition pathway improve quality of life for our adolescent asthma patients?
METHODS

- 30 patients ‘graduating’ from the Alberta Children’s Hospital asthma clinic were enrolled

- Informed consent was obtained and the patients were randomized to either the transition pathway (TPW) group or the standard care group

- All data was collected by an independent research associate and the study investigators were blinded to this data until the end of the study.
METHODS

• All patients were seen by an educator for baseline Visit 1
  • demographic data
  • spirometry,
  • Asthma Quality of Life Questionnaire with Standardized Activities [AQLQ(S)]
  • Asthma Control Questionnaire (ACQ)
  • Asthma Control Scoring System (ACSS)

• Participants then randomized to Control or TPW group
RANDOMIZATION

• The control group received standard care according to the current practice at CRC

• The TPW group was seen by an educator

• Case management: combined triage with education
Within 4 weeks of randomization, subjects in the TPW group were referred to a CRE.

Standardized education consistent with Canadian Thoracic Society (CTS) and GINA guidelines.

Action at this point was dependent upon the subject’s level of asthma control.
ALL PATIENTS

Appendix 1

CRPAC Eligible Subjects

Visit 1
Demographic data, AQLQ, ACSS, ACQ, PFT, IST, medication Hx Exacerbation Hx

Randomization

Within 4 weeks

Transition Pathway
Visit 2 A
CCAP CRE Visit
-Control (GINA)
-Education

Uncontrolled

Controlled or partly controlled

Data Collection at 12 months to include:
Smoking Hx Possession

See Appendix 2

See Appendix 3

Data Collection
-AQLQ, ACSS, ACQ
-PFT
-IST
-MEDS
-EXACERB
-HCU

Usual care

Baseline

6 months (Visit 2)

12 months (Visit 3)

Transition Pathway Data Collection
Baseline, 6mths 12mths
**Appendix 2**

Visit 2A Controlled (C) or Partly Controlled (PC)

6 week Follow up Telephone Assessment (TCA)

- Controlled
  - 6 month CRE Visit Report to FP.
  - Controlled
    - Report to FP
    - Respirology referral Report to FP and Respirologist.
  - PC or UC

- PC or UC
  - Respirologist referral and 6 week TCA
    - Controlled
    - CRE Visit in 18 Weeks Report to FP and Respirologist.
    - PC or UC
      - 6 week TCA
        - Controlled
          - CRE Visit in 12 Weeks Report to FP and Respirologist.
          - PC or UC
            - 6 week TCA
              - CRE Visit in 6 Weeks Report to FP and Respirologist.
Appendix 3

Visit 2A Uncontrolled (UC)

Respirologist referral +
6 week telephone assessment (TCA)

Controlled

PC or UC

CRE Visit in 6 months
Report to FP and
Respirologist.

6 week TCA

Controlled

PC or UC

CRE Visit in 18 weeks
Report to FP and
Respirologist.

6 week TCA

Controlled

PC or UC

CRE Visit in 12 weeks
Report to FP and
Respirologist.

6 week TCA

CRE Visit in 6 weeks
Report to FP and
Respirologist.
RESULTS

Introduction

Excessive data mining can lead to overfitting

If you torture the data long enough, it will confess.
Ronald Coase
RESULTS

• Mean baseline AQLQ(S) was 6.01 (SD 0.73) and 5.93 (SD 0.6) in the control and TPW groups, respectively.

• At 6 months, the mean change in AQLQ(S) was -0.06 (SD 0.75) in the control group and 0.47 (SD 0.56) in the TPW group (p=0.04).

• At 12 months the mean change in AQLQ(S) was 0.07 (SD 0.64) and 0.14 (SD 0.51), respectively (p=0.78).

• There was no significant change in ACQ between the two groups at 6 or 12 months.
CONCLUSION

• Implementation of a pediatric-to-adult asthma transition program improved asthma specific quality of life of young asthma patients in the Calgary area at 6 months but not at 12 months.

• There was no significant difference in asthma control.
DISCUSSION

• 12 month results may be due to decreased TPW subject interaction in the 6 to 12 month time period.

• Sample Bias?
  • All subjects were initially followed by a well-structured pediatric asthma clinic.
    • Would asthma patients not followed by an asthma clinic do better within a formal transition program?

  • Baseline AQLQ(S) was relatively high (6.1 and 5.93)
    • More difficult to detect a change over time?

• Sample size was limited and study time period was restricted to 12 months.
QUESTIONS?