

# **Education & Skills for Advancing a Life Course Approach to Cancer Control**

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# Disclaimer

**I have no conflicts to disclose**

# Overview

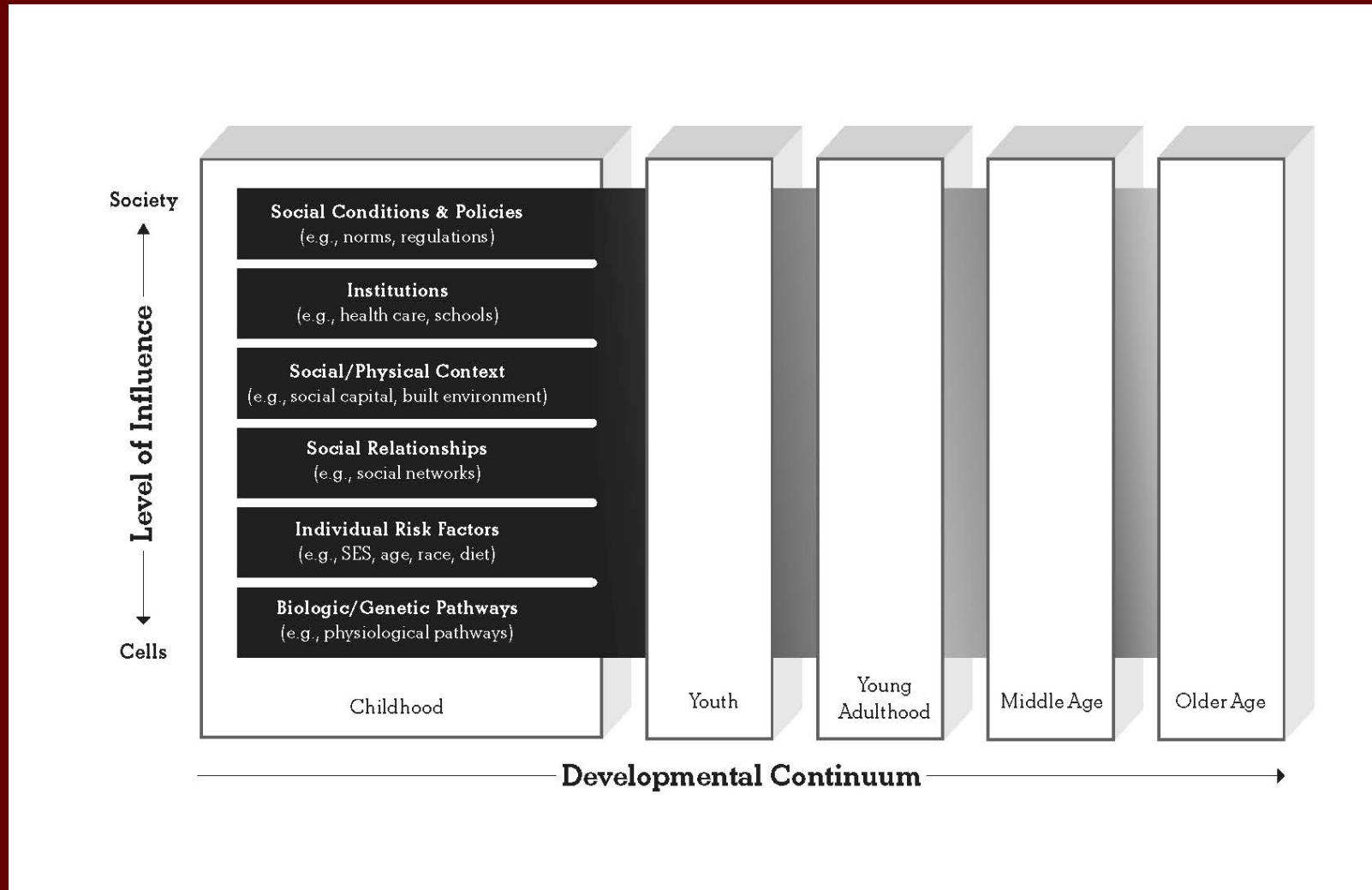
- **Recommendation A.10 as focus**
- **Preadolescence & adolescence as targets of education**
- **Opportunity & challenges**
- **Building skills within communities**
- **Academic training to achieve a coordinated approach**
- **Conclusions**

# **Recommendation A.10**

## **Education & Skill Building**

**Launch & expand public engagement, literacy, & outreach activities, starting with K-12 curriculum & through technology platforms, to broaden the understanding of cancer prevention as an integral component of a healthy life course**

# Cancer Risk & Outcomes across the Life Span



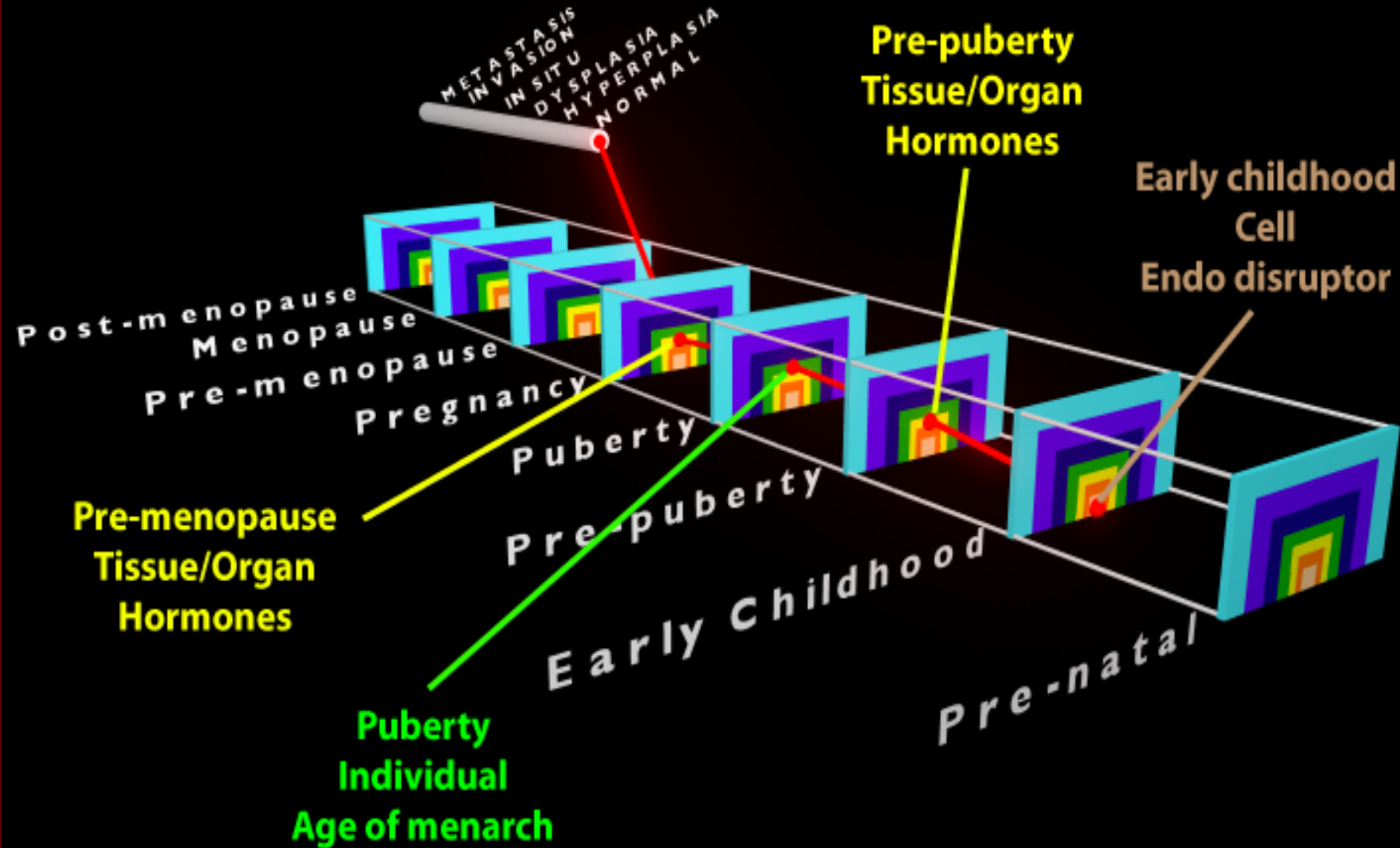
# Preadolescence & Adolescence as Targets

**Periods of rapid growth like fetal development & puberty are sensitive to environmental events**

- **Maternal weight gain during pregnancy ↑ risk of prostate cancer during adulthood**
- **Exposure to toxic chemicals during the period of puberty increases odds of adult breast cancer**

**While biological changes have no immediate benefit, they can persist across generations**

# Breast Cancer & the Life Course



Source: Institute of Medicine (2012). *Breast Cancer and the Environment: A Life Course Approach*. Washington, DC: National Academies Press.

# **Opportunity & Challenges for Education & Training: Preadolescents & Adolescents**

## **Opportunity:**

- **Time when health habits can be shaped & individuals & families can begin to set a course for minimizing harmful exposures**
- **Addressing modifiable risk factors for cancer has the potential to improve lives during adulthood & has implications for the health of the nation**



# **Opportunities & Challenges for Education: & Training: Preadolescents & Adolescents**

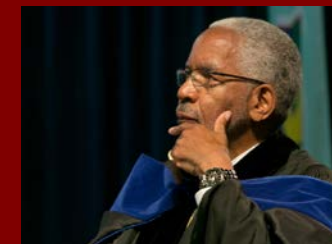
## **Challenges:**

- **Long latency period between early life exposures & the onset of cancer**
- **Linking to life goals rather than inserting adults' values**
- **Accounting for within-age-cohort differences by race, socioeconomic status, geography (rural vs. urban)**
- **Accounting for community norms & values**
- **Getting into schools**

# **Designing Messages with Preadolescents & Adolescents**



# South Side Chicago Breast Cancer Summit



Metropolitan Apostolic Community Church



Q & A luncheon



**1<sup>st</sup> action item chosen:**

**Design & deliver messages about health for  
12-16 year old youth to decrease  
their cancer risk**





# Summer Apprentices from South Side High Schools (the Brains)



- Directed by 5 summer apprentices & their friends with a videographer from the University of Chicago
- 5-episode miniseries on DVD
- Community screening
- Shown on cable tv & in Chicago public schools

# Livin' in Your Body 4 Life!

*The mini-series*

**Welcome!**



September, 2008

Dear Teacher,

Thank you for using our health education DVD in your classroom!

The enclosed video episodes were made by a group of high school students from Chicago's southside. The disc is comprised of five separate segments, each running between 15 and 25 minutes long. The episodes address a range of physical and social health issues that young adults encounter: Breast Cancer, Stress & Fitness, the Body, Allergies & Asthma and Addictions.

To accompany each video and to reinforce the information that is shared, we have created a set of question and answer worksheets for students to fill out as they watch each episode, as well as an answer key that can also be handed out to students.

We think that the program is of excellent quality and an effective health education tool. The episodes are relevant and very factual, as well as engaging to watch. Please let us know if you have any questions. You can reach us by calling

## Episode Two: **Stress and Fitness**

00:25:29

Learn techniques for dealing with stress and how exercise can improve your ability to cope with difficult situations. This episode includes original poetry readings.



[Watch video](#)



[Listen to MP3](#)



## Episode Five: **Stuck on it? Don't Let it Stick on You!**

00:14:53

Addictions can range from being relatively harmless to debilitating. Learn how to manage your activities and spot the warning signs so you can live a healthy life.



[Watch video](#)



[Listen to MP3](#)





# Bringing Oncologists to High Schools



Gateway High School, St. Louis, MO

# **Building Skills within Communities**



# Washington University's Community Research Fellows Program



Cohort 5

# Community Research Fellows Program

- **Part of the Program for the Elimination of Cancer Disparities**
- **15-week program that follows a Master of Public Health curriculum**
- **Education on public health research methods & hands-on experience to take back to communities**
- **Graduates use knowledge gained to improve health in their neighborhoods (community ambassadors)**

# **Training Toward an Integrated Approach**

# Transdisciplinary Training in Cancer

**Trainees:** Economics, urban planning, reproductive biology, urban sociology, epidemiology, anthropology, & biostatistics

**Mentors:** 23 faculty in the biological, social, behavioral, & clinical sciences

Each trainee chooses 3 mentors who span the spectrum from discovery to translation

Biomarker &  
Animal Model  
Studies



Preclinical &  
Clinical  
Studies



Impact on Patient  
& Community



## A Case Study Approach to Train Early-Stage Investigators in Transdisciplinary Research

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**T**ransdisciplinary (TD) research is a collaboration in which investigators from diverse backgrounds co-generate ideas. Few successful examples of TD research outcomes have been reported, possibly due to a training barrier. Here, TD trainees present a case study methodology that augmented classic training exercises by removing hierarchical barriers and allowing the practice of TD methodologies. A 30-minute development period was critical for the team to enter the conceptualization phase of TD research, making 90-minute sessions preferable for these exercises. Six sessions over an academic year were necessary for optimum idea formation. Generating buy-in was a challenge, as pressuring potential team members to participate would alter viewpoint equitability.

Internal and external enthusiasm grew over the time period. Participation led to sustained collaborations and provided a marketable skillset. This method was low-cost and, likely, generalizable to other institutions. Thus, case study approaches may be effective tools to train researchers in TD interactions.

**Keywords:** transdisciplinary research, post-doctoral fellows, training, case studies.

### 1 Introduction

Transdisciplinary (TD) research is a mode of collaboration in which investigators operate outside their disciplines to generate shared research aims [1]. The overarching goal of TD research is to re-

- Case study methodology augmented classical training by promoting team work & a systems approach
- 30-minute development period in the conceptual phase
- 60 90-minute sessions over an academic year

**The case: A smoking landfill in North St. Louis. Residents voiced health concerns, especially for their children. The local health department & EPA said they found no concrete evidence of harm. Mistrust was growing. Trainees took a multi-level approach.**

# Conclusions

- **Preadolescence & adolescence are important targets for cancer control. There is no “too early”**
- **Involving the Department of Education in cancer control planning can help boost the engagement of local schools**
- **Proscriptive or fear-based messages are less effective than messages aligned with youths’ life goals**
- **Well-designed education & training for community members extends provider, healthcare system, & organization-based efforts at cancer control**
- **Early team-based training fosters a systems mind-set & helps to ensure that cancer control messages are synergistic & integrated**