Impact of Service Learning on Student Attitudes and Career Choice

Maria Teresa Santos, MD
Jennifer Purcell, PhD
Lisa Rucker, MD
Elizabeth Conley, MPH

AAMC Annual Meeting
November 2012
San Francisco, California

Albert Einstein College of Medicine
The Bronx

**Bronx**
- Population - 1,385,000
- 28% live below the federal poverty level

**South Bronx**
- 16th Congressional District—poorest in US
- 38% live below federal poverty level

**Mortality**
- Ranked 61/62 of the counties in NYS

**Morbidity**
- Ranked 62/62

**Social and Economic Factors**
- Ranked 62/62

*US Census Data 2010*
Service Learning

Service-Learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.

From: http://educationprogram.duke.edu/service-learning
Medical schools should make available sufficient opportunities for medical students to participate in service-learning activities, and should encourage and support student participation.
Einstein Cares for the Community (ECC)

Three year funded HRSA/ARA grant (2009-2012)

Resources
- Engaged Student Body
- Montefiore Residency Program in Social Medicine

Barrier
- Einstein has no central Office of Volunteer or Community Service
Program Goals

- Create longitudinal **partnerships** with community-based organizations (CBOs)
- Improve students’ **attitudes** toward working with community groups
- Increase students’ **self-efficacy** in providing care for underserved
- Foster students’ **interest** in primary care
Program Summary

Community Outreach

Students work in teams - extracurricular

Didactic

Health Disparities
Cultural Competence
Advocacy

Mentoring

Regular meetings with faculty mentors

Other

Tour of the Bronx; Book Club
Care for the Homeless

1. Emergency room alert system to engage homeless clients who utilize the ER for care

2. Health education workshops for shelter residents

3. Online resource guide for homeless Bronx residents
Bronx Pride Community Center (BCPC)

1. GED program for LGBT youth of color

2. Survey of LGBT persons of color regarding social media use for research, health education, and outreach purposes

3. Digitizing case management files for research, outreach, and programmatic purposes
Horizon Juvenile Detention Center

Health education workshops for residents (youth ages 11-18) on sexual and mental health topics
PCCES: Primary Care and Community Engagement Survey

Survey Development

Scales

- Primary Care Knowledge and Attitudes
- Self-efficacy, Attitudes and Interest
  - Working with underserved populations
  - Working with community-based organizations

Pilot Test and Psychometrics

- n = 198
- $\alpha = .76$ to $\.85$
PCCES:
Primary Care and Community Engagement Survey

Survey administered
   September 2011 and May 2012

Intervention Group
   MS1s and MS2s in the ECC Group

Control Group
   MS1s who expressed interest in ECC but did not join
Results: Demographics

- Male
- Female
- MS1
- MS2
- White
- Non-URM
- URM*

Intervention (n = 18)  Control (n = 29)  Einstein (n = 366)

* Under-represented minority (defined by HRSA)
Did participation in a service learning program (ECC) affect students’ attitudes toward working with underserved communities?
Results: Med-Underserved Attitudes

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th></th>
<th>Control</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
</tr>
<tr>
<td>Pre-Test</td>
<td>4.28</td>
<td>0.60</td>
<td>3.72</td>
<td>0.62</td>
</tr>
<tr>
<td>Post-Test</td>
<td>4.31</td>
<td>0.53</td>
<td>3.67</td>
<td>0.58</td>
</tr>
<tr>
<td>Adj. Gain Score</td>
<td>0.140</td>
<td></td>
<td>-0.108</td>
<td></td>
</tr>
</tbody>
</table>

ANCOVA  \( p = .043 \)

**Significant change** in attitudes between groups over time when controlling for baseline.

ECC group scores increased whereas control group scores decreased.
Did participation in a service learning program (ECC) affect students’ efficacy in working with the medically underserved?
Results: Med-Underserved Efficacy

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>sd</td>
<td>mean</td>
</tr>
<tr>
<td>Pre-Test</td>
<td>4.09</td>
<td>0.62</td>
<td>4.05</td>
</tr>
<tr>
<td>Post-Test</td>
<td>4.14</td>
<td>0.56</td>
<td>4.22</td>
</tr>
<tr>
<td>Adj. Gain Score</td>
<td>0.080</td>
<td></td>
<td>0.160</td>
</tr>
</tbody>
</table>

**ANOVA**  \( p = .618 \)

No significant change in self-efficacy between groups over time when controlling for baseline.
Did participation in a service learning program (ECC) affect students’ attitudes toward primary care?
### Results: Primary Care Attitudes

<table>
<thead>
<tr>
<th></th>
<th>(n = 18) Intervention</th>
<th>(n = 29) Control</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>sd</td>
<td>mean</td>
</tr>
<tr>
<td>Pre-Test</td>
<td>4.04</td>
<td>0.30</td>
<td>3.83</td>
</tr>
<tr>
<td>Post-Test</td>
<td>4.09</td>
<td>0.29</td>
<td>3.86</td>
</tr>
<tr>
<td>Adj. Gain Score</td>
<td>0.128</td>
<td></td>
<td>-0.006</td>
</tr>
</tbody>
</table>

**ANCOVA p = .135**

No significant change in attitudes between groups over time when controlling for baseline.

**ECC group scores were higher** than control before and after the program.
Did participation in a service learning program (ECC) affect students’ confidence in pursuing a career in primary care?
Results: Pursue a Career in Primary Care?

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th></th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
<td></td>
</tr>
<tr>
<td>Pre-Test</td>
<td>2.83</td>
<td>1.04</td>
<td>2.76</td>
<td>0.95</td>
<td></td>
</tr>
<tr>
<td>Post-Test</td>
<td>3.22</td>
<td>0.94</td>
<td>2.36</td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Adj. Gain Score</td>
<td>0.407</td>
<td></td>
<td>-0.369</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ANCOVA** \( p = .000 \)

Change scores are significantly different between groups when controlling for baseline. Confidence increased for the ECC group and decreased for the control group.

14% of Control group participants plan to pursue a career in primary care. 22% of ECC participants plan the same.
Discussion

Small number of matched data
- Intervention – 18 of the 29 completed post survey
- Control – 29 of the 49 completed post survey

Control Students involved in other similar clubs
- Free clinic
- HIV outreach group
- Physicians for Social Responsibility
- Physicians for Human Rights
Discussion

Intervention Group (ECC)
- Time Investment
- Mentor Involvement
- Different experiences/emphasis
  - Research
  - Health Education
  - Advocacy

Idealism and Reality
- Bureaucracy
- Importance of funding
- Complex social factors
Focus Group

Conducted at end of program

Two separate focus groups

- 11 First year Medical Students (MS1)
- 12 Second Year Medical Students (MS2)
Focus Group Questions

How has participating in ECC affected your interest and confidence in working with medically underserved communities at a community level to address health issues?

How has participating in ECC affected your interest in pursuing a career in primary care?
If you are, as a physician, just looking at one disease at a time, you’re really not going to get anywhere with any of the populations you’re working with.

A lot of the time, it just came down to: Well, we can’t find a job. Well, we can’t find a home. If you don’t work with these root causes, then the diabetes, the high blood pressure, the smoking, none of that is going to be cured.
Focus Group

Working with the Community

- If they (CBOs) can’t get the funding, they don’t get the people to come. And if they don’t get the people, they don’t get funding. So it’s a vicious cycle.

- We can’t just go in with our own agenda. We really have to listen ... what the needs are for that specific community.
Focus Group

Primary Care

- You really have to be very passionate about what you do in order for this to work.

- I no longer see primary care as a doctor who just refers patients to other doctors. That image has been completely shattered. I see that they are so much more involved.
Focus Group

Career Choice

- I came in with a very strong longing to do primary care... (ECC) showed me how difficult it is, but how important it is... someone’s got to do it, but is it going to be me? I’m not sure anymore.

- I do want to be a primary care physician... but I’m really going to have to think outside the box and really pursue opportunities that aren’t traditional.
Focus Group

Public Health/Advocacy

- It’s made me more interested in a Master of Public Health, or some other way of fixing the problems, not on a patient to patient basis, like on a population basis.

- I’m to the point where I’m considering taking the year off and doing something in the Bronx that will allow me to get deeper into the community and have richer relationships.
Next Steps

Continuation of student projects
   Incorporated in other existing clubs

Students have started campaign to form a central
   Center for Community Engagement (CCE)

Scholarly Concentration
   TOUCH (Track on Urban Community Health)

Follow ECC students in MATCH
Bronx for Action & Justice