

# The Effects of Interdisciplinary Training on MCH Professionals, Organizations and Systems

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# The Effects of Interdisciplinary Training on MCH Professionals, Organizations and Systems

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# Our Interdisciplinary Research Team

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## *Co-Investigators*



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# Our Interdisciplinary Research Team

## *Co-Investigators*



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Special acknowledgement to William Vann, MS, PhD, DMD and Jessica Lee, PhD, DDS, MPH for their work with the ILDP in past years.

# Our Interdisciplinary Research Team

## *Director of Evaluation*



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## *Project Manager*



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Department of Maternal and Child Health

# History of Interdisciplinary (ID) Training

- 1940s - Federal Government first funded Public Health interdisciplinary training programs
- 1960s – LEND
- Late 1960s – LEAH
- Late 1960s - PPCs

# History of Interdisciplinary (ID) Training

Limited effort has been made:

- to define “interdisciplinary training/exposure”
- to assess effects of training experience on participants, the organizations within which they work or the MCH population.

# The UNC Interdisciplinary Leadership Development Program (ILDLP)

In 2000, faculty and staff from the five MCHB-funded training programs on campus (**LEND, Nutrition, Pediatric Dentistry, Public Health, Social Work**) organized the UNC-CH MCH Leadership Training Consortium to serve as a platform for shared resource development and collaborative engagement in interdisciplinary training for leadership in MCH.

# The UNC Interdisciplinary Leadership Development Program (ILDLP)

The Interdisciplinary Leadership Development curriculum consists of:

- Orientation
- 3-day Leadership Intensive
- Conflict Management and Group Facilitation
- Cultural Competence Workshop
- Minority Health Conference
- Family Professional Partnership Workshop
- Reflection



# Purpose of this Study

The purpose of this project was to examine the effects of the UNC Interdisciplinary Leadership Development Program (ILDLP) on the interdisciplinary attitudes and practices of the participants and their impact on the organizations within which they work.

# Purpose of this Study

*Hypotheses:* The ILDP has:

- enhanced the capacity of participants to **engage** in interdisciplinary practice and research, and
- enhanced the capacity of participants, either directly or through their organizational work, to **effect change** at the societal/community level through policies, practices and programs.



# Methodology

## *Data Collection methods:*

- Web-based survey
- Telephone interviews

# Methodology

## *Who responded to the survey?*

Graduates of the five MCHB training programs between 2001 and 2009:

- MPH – ILDP & non-ILDP graduates
- LEND – ILDP & non-ILDP graduates
- Nutrition – all ILDP
- Pediatric Dentistry – all ILDP
- MSPH/MSW – all ILDP

# Methodology

## *Data Analysis:*

- Qualitative Data – SAS (Cary, NC)
- Quantitative Data – Atlas.ti
- Evaluation framework - EvaluLEAD

# Methodology

## *EvaluLEAD:*

- evaluation framework recently developed and published (Grove, Kibel, & Haas, 2007)
- provides guidelines for programs to discover over time within open systems
- suggests to researchers how to discover results over time within complex organizations and systems

# Methodology

## *The EvaluLEAD Program Results Map*

Individual →

*Episodic • Developmental • Transformative*

Organizational →

*Episodic • Developmental • Transformative*

System →

*Episodic • Developmental • Transformative*

# Description of our SAMPLE

<b>GROUPS</b>	<b>Sample (N)</b>	<b>Completion Rate (N)</b>
<b>MPH</b>		
ILDP	23	65% (15)
Non-ILDP	155	57% (88)
<b>LEND</b>		
ILDP	35	80% (28)
Non-ILDP	52	40% (21)
<b>MSPH/MSW</b>		
ILDP	41	56% (23)
<b>Pediatric Dentistry</b>		
ILDP	23	83% (19)
<b>Nutrition</b>		
ILDP	20	70% (14)

# Our online survey had 3 major components:

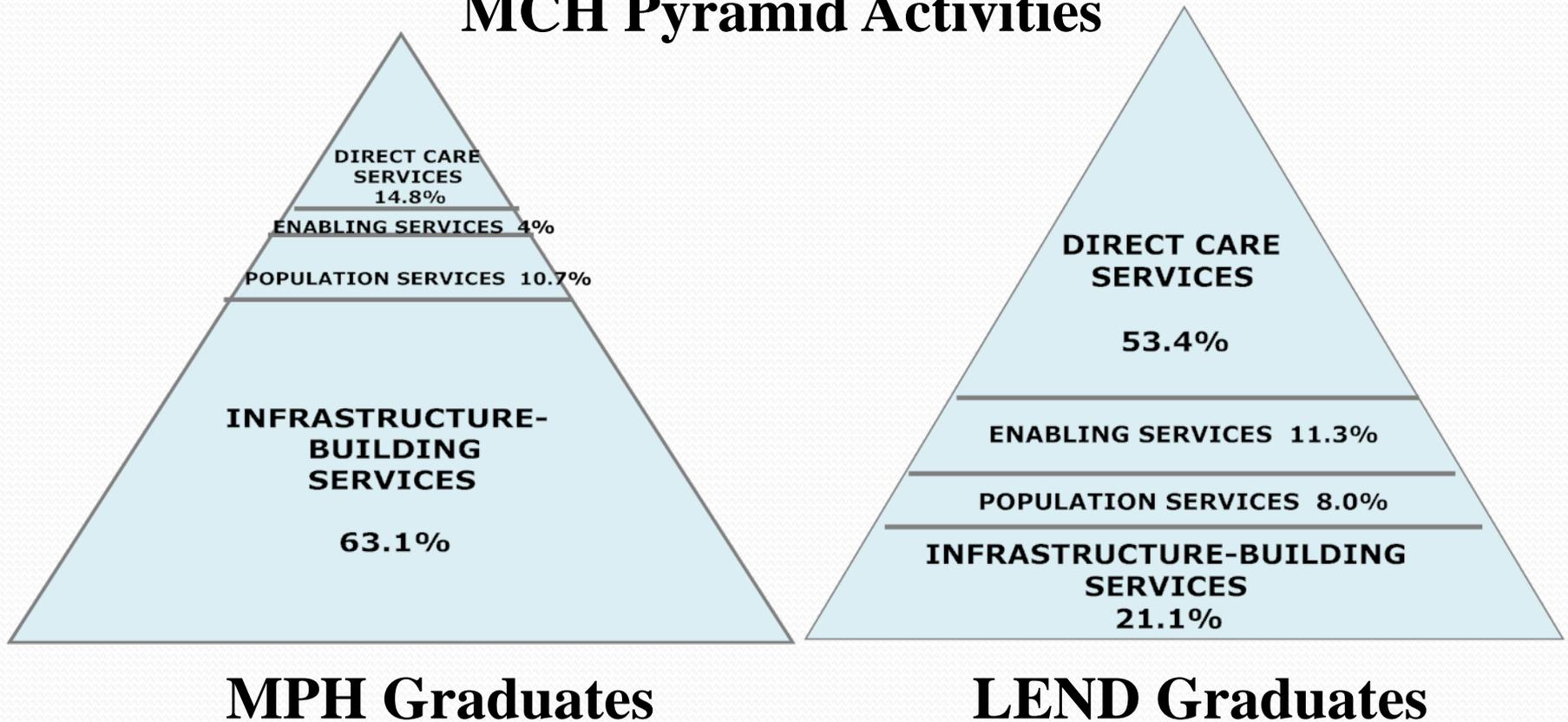
- Description of respondent *demographic information*
- Measurement of respondent *attitudes* towards and current *practices* of interdisciplinary nature
- Measurement of respondent *impact on programs and policies* and any barriers encountered

# Demographic Information

- **Question:** About what *percentage* of your total work time (all jobs you have) do you spend in these activities? (Example: 60% Direct health care services; 20% Enabling services; 20% Population-based services) If not currently working, answer for your most recent job.
- \_\_\_ Direct health care services (e.g. direct clinical or counseling services)
- \_\_\_ Enabling services (e.g. patient education, family support, case management, translation, transportation)
- \_\_\_ Population-based services (e.g. public education, screening, prevention programs)
- \_\_\_ Infrastructure-building services (e.g. agency management; needs assessment, program planning, evaluation; research; policy development and advocacy; quality assurance; partnership development; developing data systems; staff training)

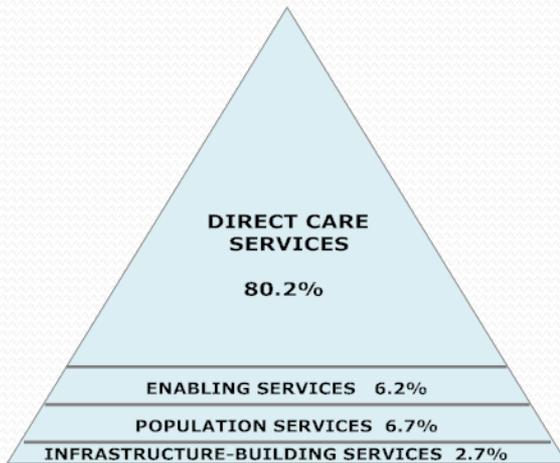
# Demographic Information

## The Mean Percentage of Time Spent in MCH Pyramid Activities

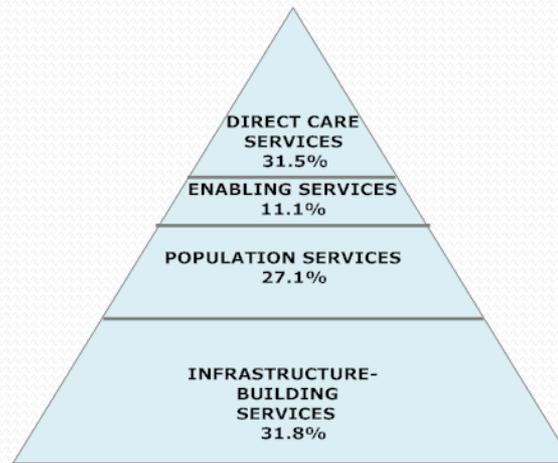


# Demographic Information

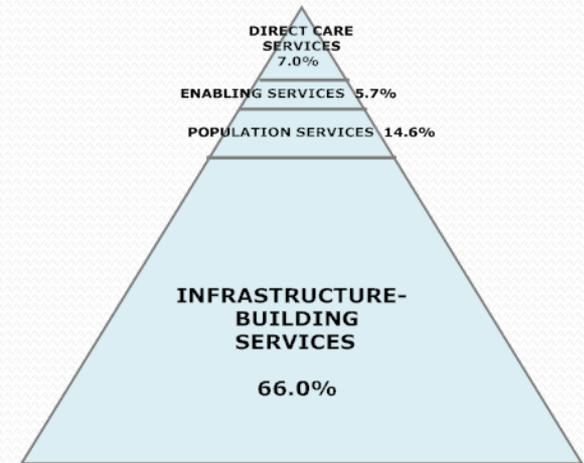
## The Mean Percentage of Time Spent in MCH Pyramid Activities



Pediatric Dentistry



Nutrition



MSPH/MSW

# Attitudes Questions

Extensive literature review yielded five (5) factors to define attitudes about interdisciplinary practice:

- Team Value
- Value of Interdisciplinary Experience
- Value Collective Competence
- Interdisciplinary Approach to Practice
- Teamwork and Collaboration

# Attitudes Questions

## *Attitude Factor: Team Value*

- |   |   |
|---|---|
| 1 | Providing services in interdisciplinary groups helps professionals become more sensitive to the diverse needs of consumers/patients than providing services as a single discipline. |
| 2 | The benefits of interdisciplinary patient care or program plans are worth the extra time it takes to communicate across disciplines.  |
| 3 | The interdisciplinary approach reduces duplication and fragmentation in the delivery of care/services.  |
| 4 | Providing services as an interdisciplinary group gets better results for consumers than working as single disciplines.  |

# Attitudes Questions

## *Attitude Factor: Value of Interdisciplinary Experience*

5	Interdisciplinary education should be a part of every health professional's pre-service training.
6	Professional problem solving skills can best be learned with professionals from my own discipline rather than in interdisciplinary groups.

# Attitudes Questions

## *Attitude Factor: Value of Collective Competence*

7	I value the contributions of other disciplines to my work.
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# Attitudes Questions

## *Attitude Factor: Interdisciplinary Approach to Practice*

- |   |   |
|---|---|
| 8 | When I look for my next position, I will purposefully look for an opportunity where collaboration across disciplines is the norm. |
|---|---|

# Attitudes Questions

## *Attitude Factor: Teamwork and Collaboration*

- |   |   |
|---|---|
| 9 | I welcome the opportunity to collaborate with members of other disciplines. |
|---|---|



# Practices Questions

The literature review also yielded three (3) factors that describe interdisciplinary practice:

- Communication/Facilitation of ID Processes (shared practice)
- Leadership
- Growth as ID Practitioner

# Practices Questions

## *Practice Factor: Communication/Facilitation of ID Processes (shared practice)*

- |   |   |
|---|---|
| 1 | Resolve conflicts in interdisciplinary groups.  |
| 2 | Facilitate family provider partnerships.  |
| 3 | Effectively work with <u>consumers</u> with cultural backgrounds different from my own.     |
| 4 | Effectively work with <u>professionals</u> with cultural backgrounds different from my own. |
| 5 | Share ideas from my discipline with members of other disciplines.                           |

Continued...

# Practices Questions

## *Practice Factor: Communication/Facilitation of ID Processes (shared practices)*

- |    |  |
|----|--|
| 6  | Ask for insight or help from members of other disciplines to address a problem.        |
| 7  | Establish decision-making procedures in an interdisciplinary group.                    |
| 8  | Develop a shared vision, roles and responsibilities within an interdisciplinary group. |
| 9  | Evaluate how well in interdisciplinary group is working together.                      |
| 10 | Intervene to improve interdisciplinary group function.                                 |

# Practices Questions

## *Practice Factor: Leadership*

- |    |  |
|----|--|
| 11 | Assemble interdisciplinary group members appropriate for a given task. |
| 12 | Coach co-workers in interdisciplinary practice.                        |

# Practices Questions

## *Practice Factor: Growth as ID Practitioner*

- |    |  |
|----|--|
| 13 | Use self-reflection to enhance my contributions to interdisciplinary work. |
| 14 | Critically evaluate information from other disciplines.                    |

# Attitudes – Findings (MPH)

Reported as Mean (SD)

#	Level of agreement with each statement		Extent to which program strengthened belief	
	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>
<b>Factor: Team Value</b>				
1	4.9 (0.4)	4.7 (0.5)	3.4 (1.1)	3.6 (1.0)
2	4.6 (0.5)	4.5 (0.5)	3.2 (0.9)	3.4 (1.0)
3	4.7 (0.6)	4.3 (0.7)	3.4 (1.0)	3.2 (1.0)
4	4.6 (0.6)	4.4 (0.6)	3.0 (1.0)	3.4 (1.0)

## *Level of Agreement*

- 1 = Completely disagree
- 2 = Disagree
- 3 = Not sure
- 4 = Agree
- 5 = Completely agree

## *Extent to which strengthened*

- 1 = Not at all
- 2 = A little
- 3 = Somewhat
- 4 = A large amount
- 5 = Greatly

# Attitudes – Findings (MPH)

Reported as Mean (SD)

	Level of agreement with each statement		Extent to which program strengthened belief	
#	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>
<b><i>Factor: Value of Interdisciplinary Experience</i></b>				
5	4.6 (0.5)	4.8 (0.4)	3.6 (1.3)	3.8 (1.1)
6	1.9 (1.1)	2.3 (1.0)	3.2 (1.0)	2.9 (1.2)

# Attitudes – Findings (MPH)

Reported as Mean (SD)

	Level of agreement with each statement		Extent to which program strengthened belief	
#	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>
<b><i>Factor: Value Collective Competence</i></b>				
7	4.9 (0.3)	4.7 (0.4)	3.1 (0.9)	3.5 (1.0)

# Attitudes – Findings (MPH)

Reported as Mean (SD)

	Level of agreement with each statement		Extent to which program strengthened belief	
#	<i>MPH Plus ILDPA (N=14)</i>	<i>MPH w/out ILDPA (N=75)</i>	<i>MPH Plus ILDPA (N=14)</i>	<i>MPH w/out ILDPA (N=75)</i>
<i>Factor: Interdisciplinary Approach to Practice</i>				
8	4.2 (0.8)	4.0 (0.9)	2.9 (1.1)	3.1 (1.1)

# Attitudes – Findings (MPH)

Reported as Mean (SD)

	Level of agreement with each statement		Extent to which program strengthened belief	
#	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>	<i>MPH Plus ILDP (N=14)</i>	<i>MPH w/out ILDP (N=75)</i>
<b><i>Factor: Teamwork and Collaboration</i></b>				
9	4.7 (0.5)	4.7 (0.6)	3.2 (1.0)	3.7 (1.0)

# Attitudes – Findings (LEND)

Reported as Mean (SD)

	Level of agreement with each statement		Extent to which program strengthened belief	
#	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>
<b><i>Factor: Team Value</i></b>				
1	4.5 (1.1)	4.4 (1.0)	4.1 (0.9)	3.8 (1.3)
2	4.5 (0.8)	4.6 (0.5)	4.1 (0.9)	3.9 (1.2)
3	4.5 (0.6)	4.5 (0.5)	3.7 (1.1)	3.6 (1.2)
4	4.5 (0.6)	4.4 (0.7)	3.9 (0.9)	3.6 (1.3)

# Attitudes – Findings (LEND)

Reported as Mean (SD)

	Level of agreement with each statement		Extent to which program strengthened belief	
#	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>
<i>Factor: Value of Interdisciplinary Experience</i>				
5	4.7 (0.5)	4.4 (0.6)	4.2 (1.0)	3.8 (1.2)
6	2.3 (0.8)	2.2 (0.6)	3.5 (1.2)	3.2 (1.3)

# Attitudes – Findings (LEND)

Reported as Mean (SD)

#	Level of agreement with each statement		Extent to which program strengthened belief	
	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>
<b><i>Factor: Value Collective Competence</i></b>				
7	4.7 (0.4)	4.5 (0.7)	4.0 (1.0)	3.7 (1.2)

# Attitudes – Findings (LEND)

Reported as Mean (SD)

#	Level of agreement with each statement		Extent to which program strengthened belief	
	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>	<i>LEND Plus ILDP (N=27)</i>	<i>LEND w/out ILDP (N=20)</i>
<i>Factor: Interdisciplinary Approach to Practice</i>				
8	4.6 (0.6)	3.7 (0.9)	4.1 (1.0)	3.4 (1.2)

# Attitudes – Findings (LEND)

Reported as Mean (SD)

	Level of agreement with each statement		Extent to which program strengthened belief	
#	<i>LEND Plus ILDP (N=14)</i>	<i>LEND w/out ILDP (N=75)</i>	<i>LEND Plus ILDP (N=14)</i>	<i>LEND w/out ILDP (N=75)</i>
<i>Factor: Teamwork and Collaboration</i>				
9	4.9 (0.4)	4.7 (0.5)	4.3 (1.0)	3.8 (1.3)



“The interdisciplinary leadership program in which I participated was eye opening. Through different leadership exercises, we were exposed to the various ways in which students from different health disciplines are encouraged to think and work. It taught us not only the importance of having different view points, but also how to approach group work, problem solving, and conflict management with sensitivity and an open mind to different modes of thinking.”

*-MPH ILDP graduate*



“The knowledge I have gained about other disciplines has helped me tremendously in my work evaluating students for special needs services. It is essential to have an understanding of all disciplines that work with a client and to understand the client's functioning in areas in which I am not an expert.”

*-LEND ILDP graduate*

# Practices – Findings (MPH)

Reported as Mean (SD)

Qx#	In the past three months, how often have you used this skill in your work?	
	MPH Plus ILDP (N=14)	MPH w/out ILDP (N=75)
<b>Factor: Communication/Facilitation of ID Processes (shared practice)</b>		
1	2.9 (1.5)	2.6 (1.3)
2	2.2 (1.8)	1.7 (1.2)
3	4.4 (1.0)	3.4 (1.6)
4	4.4 (1.0)	4.2 (1.1)
5	3.6 (0.9)	3.8 (1.0)
6	3.7 (0.9)	3.8 (0.9)
7	3.3 (1.0)	2.9 (1.3)
8	3.5 (0.9)	3.2 (1.1)
9	2.4 (1.1)	2.6 (1.1)
10	2.1 (0.9)	2.3 (1.1)

*How often have you used this skill in your work?*

1 = Never

2 = Rarely

3 = Occasionally

4 = Often

5 = Very Often

# Practices – Findings (MPH)

Reported as Mean (SD)

Qx#	<u>In the past three months, how often have you used this skill in your work?</u>	
	MPH Plus ILDP (N=14)	MPH w/out ILDP (N=75)
<i>Factor: Leadership</i>		
11	3.9 (1.0)	3.4 (1.3)
12	1.9 (0.9)	2.3 (1.2)

# Practices – Findings (MPH)

Reported as Mean (SD)

Qx#	<u>In the past three months, how often have you used this skill in your work?</u>	
	MPH Plus ILDP (N=14)	MPH w/out ILDP (N=75)
<i>Factor: Growth as ID Practitioner</i>		
13	3.6 (1.0)	3.4 (1.1)
14	3.5 (0.9)	3.6 (1.0)

# Practices – Findings (LEND)

Reported as Mean (SD)

Qx#	<u>In the past three months, how often have you used this skill in your work?</u>	
	LEND Plus ILDP (N=25)	LEND w/out ILDP (N=18)
<b><i>Factor: Communication/Facilitation of ID Processes (shared practice)</i></b>		
1	3.0 (1.2)	2.3 (1.2)
2	3.6 (1.3)	2.9 (1.6)
3	4.0 (0.9)	3.6 (1.5)
4	3.3 (0.9)	3.2 (1.0)
5	4.2 (0.7)	3.6 (1.3)
6	4.3 (0.7)	3.6 (1.0)
7	3.1 (1.2)	2.4 (0.9)
8	3.3 (1.1)	2.6 (1.1)
9	2.8 (1.1)	2.4 (0.9)
10	2.6 (1.3)	2.2 (0.8)

# Practices – Findings (LEND)

Reported as Mean (SD)

Qx#	<u>In the past three months</u> , how often have you used this skill in your work?	
	LEND Plus ILDP (N=25)	LEND w/out ILDP (N=18)
<i>Factor: Leadership</i>		
11	3.6 (1.2)	3.0 (1.2)
12	2.6 (1.3)	2.4 (1.0)

# Practices – Findings (LEND)

Reported as Mean (SD)

Qx#	<u>In the past three months</u> , how often have you used this skill in your work?	
	LEND Plus ILDP (N=25)	LEND w/out ILDP (N=18)
<i>Factor: Growth as ID Practitioner</i>		
13	3.5 (1.1)	3.1 (1.1)
14	3.7 (0.8)	3.0 (1.4)



“In my earlier work as a general pediatrician, I referred patients to ancillary care providers (audiology, speech therapy, physical therapy, psychology), but I never worked directly with any of these specialties. Through the LEND program I developed a better appreciation of the services they offer and how to incorporate them into patient care plans.”

*-LEND ILDP graduate*

“The biggest contributions (and they were really big!) that the consortium activities made was:

- 1) Helping me recognize how I approach problems and situations (and why!), and how that might be different from how another team member does.
- 2) How I can "reframe" someone else's operating style more positively, as opposed to getting frustrated or see it as not having value.
- 3) How I see/seek opportunities for leadership

My job has always necessitated consulting people from other disciplines. However, especially the MCH leadership training course gave me the chance to hear from people in other clinical disciplines in a setting that allowed more relaxed dialogue, which wasn't focused on a particular situation or particular patient. This has led me to value what people from other disciplines have to offer in a more general way.”

*-MPH ILDP graduate*



“The program was very helpful in building confidence and leadership skills. For example, working with my peers and mentors on our “hot topics” discussions in conjunction with the University of Tennessee was a great experience that allowed me to feel like I could work with a variety of different people and topics. I felt that my leadership skills were enhanced by the program.”

*-Nutrition ILDP graduate*



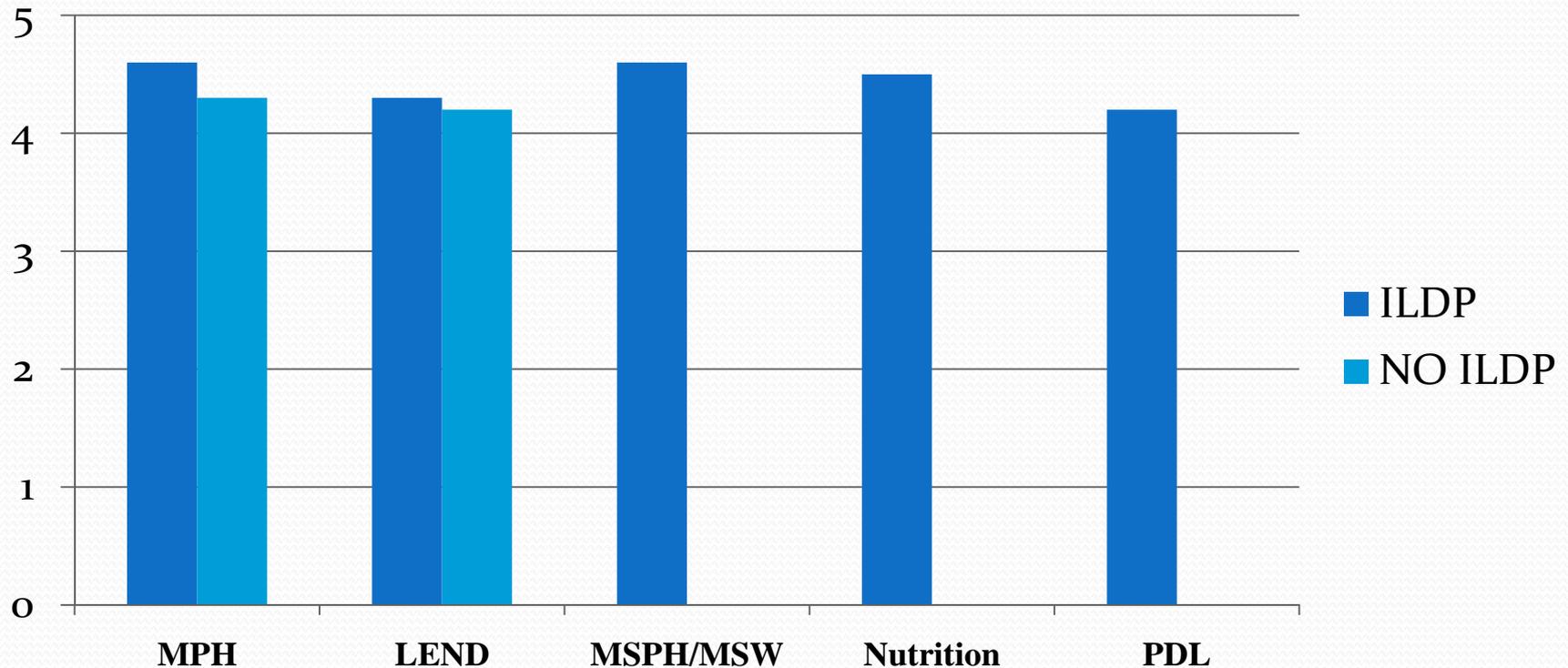
“By working directly with other disciplines, we were able to develop professional relationships as well as personal friendships. This type of networking gives you all kinds of outlets to have at your finger tips when treating patients that may have needs outside your training.”

*-Pediatric Dentistry ILDP graduate*

# Barriers to Interdisciplinary Practice Job Presents Opportunities to Collaborate

Reported as Mean

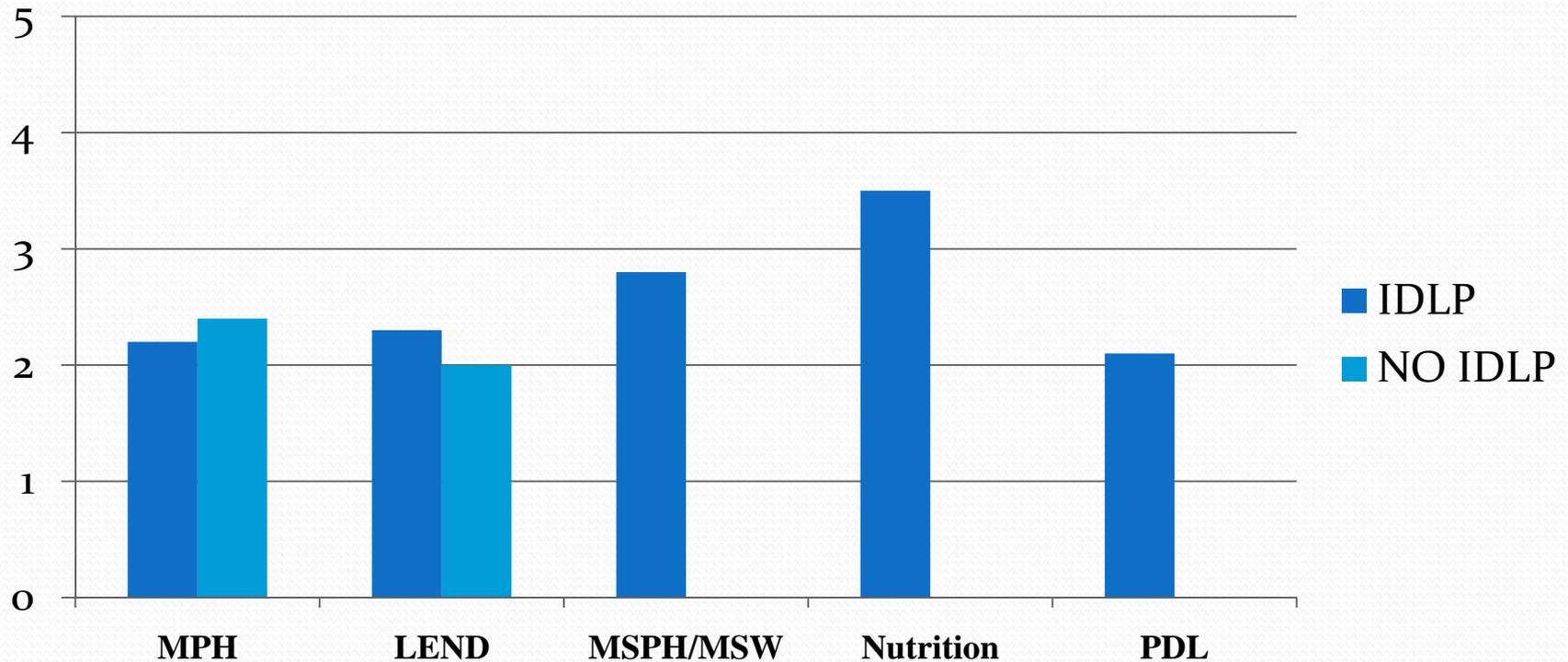
*Level of Agreement: 1 = Completely disagree 2 = Disagree 3 = Not sure  
4 = Agree 5 = Completely Agree*



# Barriers to Interdisciplinary Practice Not as valued as some other disciplines

Reported as Mean

*Level of Agreement: 1 = Completely disagree 2 = Disagree 3 = Not sure  
4 = Agree 5 = Completely Agree*

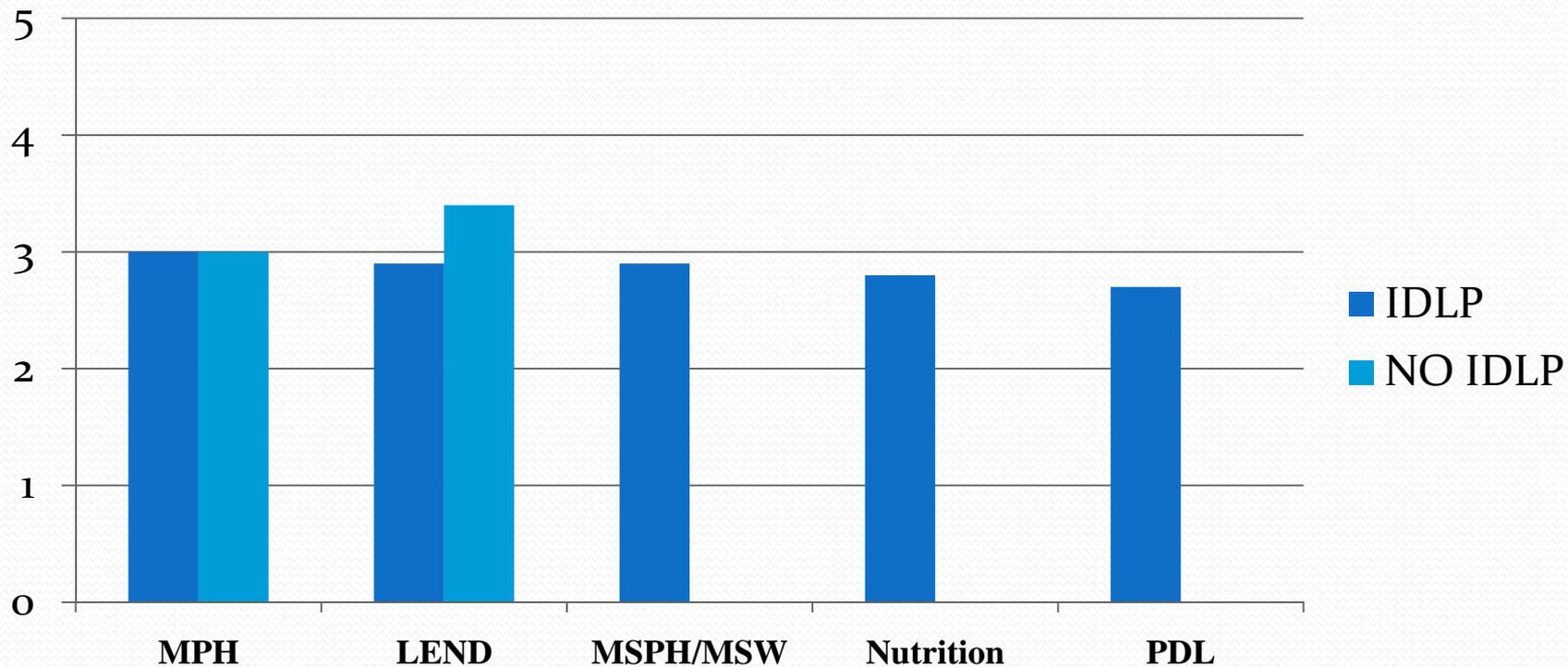


# Barriers to Interdisciplinary Practice

## Categorical Funding Limits ID Practice

Reported as Mean

*Level of Agreement: 1 = Completely disagree 2 = Disagree 3 = Not sure  
4 = Agree 5 = Completely Agree*



# What have we learned from this study?

- Intentional interdisciplinary encounters appear to have strengthened attitudes and practices.
- Training programs should “think outside the box.”
- Participants report effects on programs and policies over time.

# What seems to be of value?

- Programs should incorporate active learning experiences
- Hold participants accountable
- Faculty and fellows sharing experiences as colleagues

# Closing Thought

Interdisciplinary practice – involving human services, research, and training – is essential to the field of maternal and child health, given the complex issues and needs of this diverse population. Our project suggests that the intentional, structured Interdisciplinary Leadership Development Program at UNC, built on principles of problem-based, adult learning, has enhanced the important MCH Leadership Competency of interdisciplinary team building among MCHB trainees.

# Questions?

For further information after our webinar, please contact Lew Margolis at [lmargoli@email.unc.edu](mailto:lmargoli@email.unc.edu).