



# The National Children's Study Brookings, Yellow Medicine, Pipestone & Lincoln Counties (BYPL) Vanguard Center

**Bonny Specker, Ph.D.**  
South Dakota State University



# BYPL Vanguard Center

## SDSU INVESTIGATORS

Bonny Specker, PhD (*SDSU PI*)

Kevin Dalsted, MS

Nancy Fahrenwald, RN, PhD

Donna Hess, PhD

Diane Kayongo-Male, PhD

Andrew Stremmel, PhD

Matthew Vukovich, PhD

Ann Wilson, Ph.D.

## Expertise

Pediatric & Nutritional Epidemiology

Environmental Monitoring

Community Nursing

Rural Sociology

Rural Sociology

Human Development

Exercise Physiology

Human Development



# BYPL Vanguard Center



## LOCAL ADVISORS & CONSULTANTS

Richard Adcock, MBA

Jeffrey Boyle, MD

Lawrence Fenton, MD

Haugen-Rogers, Jan

Julie Johnson, MD

Brad Randall, MD

Dennis Stevens, MD, MPH

## Expertise

Children's Specialty Clinics

Perinatology

Pediatrics

Women's & Children's Services

Disabilities & Rehabilitation

Forensic Pathology & Coroner

Neonatology



# BYPL Vanguard Center



## CINCINNATI CHMC INVESTIGATORS

## Expertise

Bruce Lanphear, MD, MPH  
(*CHMC PI*)

Robert Kahn, MD, MPH

Heidi Kalkwarf, PhD, RD

Kim Yolton, PhD

Richard Hornung, PhD

Pediatric Environmental Epidemiology

Pediatric Epidemiology

Nutritional Epidemiology

Developmental Psychology

Environmental Epi & Biostatistics



# BYPL Vanguard Center

## CINCINNATI CHMC - TIER II

Frank Biro, MD

Steve Chernausek, MD

Lisa Martin, PhD

Ardythe Morrow, PhD

Kieran Phelan, MD, MS

Doug Ris, PhD

Marsha Wills-Karp, PhD

## Expertise

Adolescent Medicine

Pediatric Endocrinology

Genetic Epidemiology

Pediatric Infectious Disease Epidemiology

Pediatric Injury Epidemiology

Pediatric Neuropsychology

Pediatric Allergy & Immunology



# BYPL Vanguard Center

## UNIV OF CINCINNATI

Grace LeMasters, PhD (*UC PI*)

Kim Dietrich, PhD

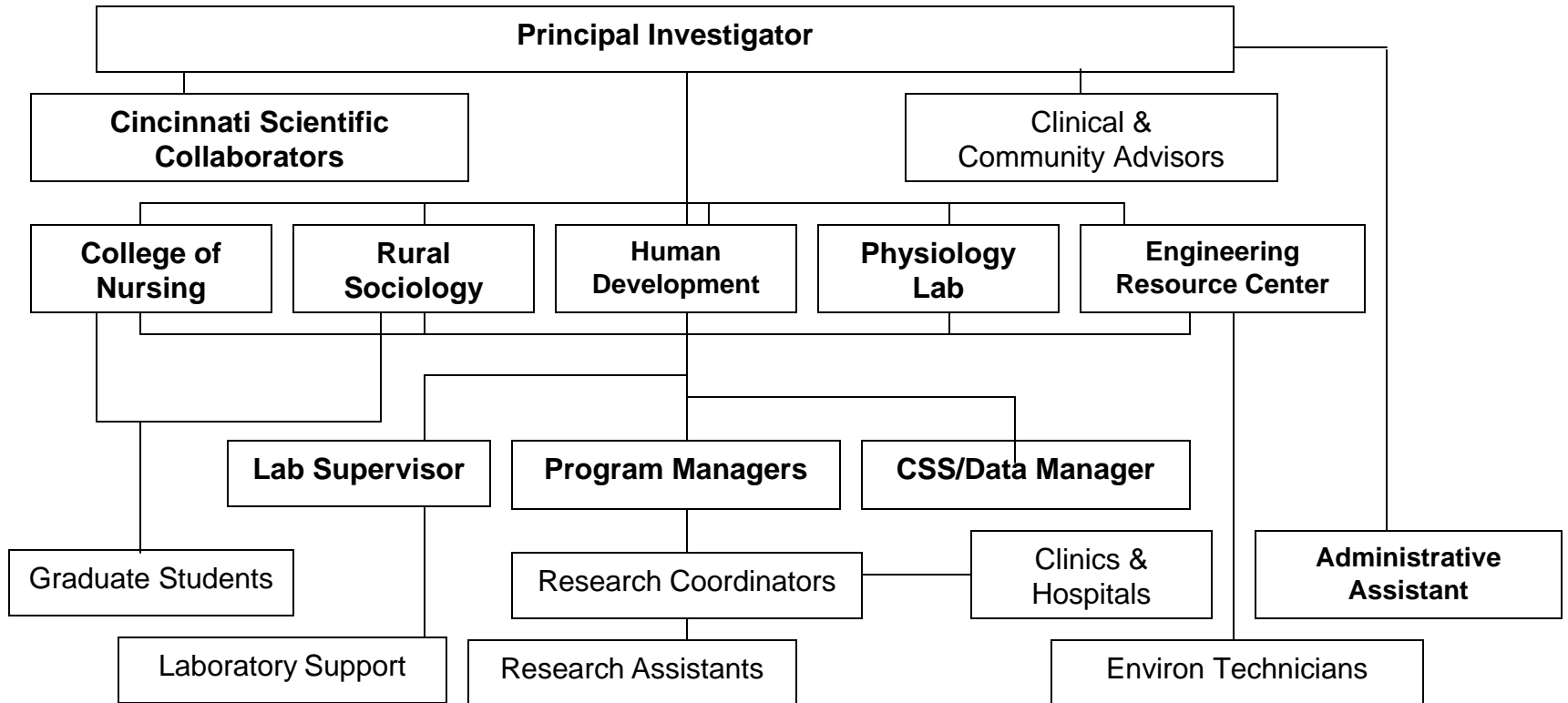
## Expertise

Environmental & Perinatal Epidemiology

Environmental & Behavioral Epidemiology



# BYPL Vanguard Center Organizational Structure



# BYPL Vanguard Center Population Characteristics



Characteristic	Brookings	Yellow Medicine	Pipestone	Lincoln	Total
<b>Population</b>	28,392	10,677	9,681	6,159	<b>54,909</b>
<b>Square Miles</b>	794	758	466	537	<b>2,555</b>
<b>Population Density (#/mi<sup>2</sup>)</b>	36	14	21	12	<b>21</b>
<b>Urban</b>					
% Inside urbanized areas <sup>a</sup>	0%	0%	0%	0%	<b>0%</b>
% Inside urban clusters <sup>b</sup>	69%	18%	42%	0%	<b>44%</b>
<b>Rural</b>					
Farm <sup>c</sup> (%)	6%	18%	17%	23%	<b>12%</b>
Non-Farm <sup>d</sup> (%)	28%	64%	42%	77%	<b>44%</b>

a urbanized area: > 50,000 people

b urban cluster: 2,500-49,999 people (**Brookings largest city: est. 2004 population = 18,700**)

c rural farm: operating, open country farms & ranches

d rural non-farm = places under 2,500 population & people living in open country (not engaged in farming or ranching)

Data from US Census, 2000





# BYPL Vanguard Center Population Characteristics



Characteristic	Brookings	Yellow Medicine	Pipestone	Lincoln	Total
Women Aged 18-39 Years	6,029	1,291	1,214	707	<b>9,241</b>
Median Age (y)	27	40	40	43	-
Households	11,576	4,873	4,434	3,043	<b>23,926</b>
Total Resident Births (2003)	309	131	106	75	<b>621</b>
Inside of County	177	61	52	10	<b>300</b>
Outside of County**	132	70	54	65	<b>321</b>
Non-Hispanic White	96%	95%	96%	98%	<b>96%</b>
Median Household Income	\$35,438	\$34,393 *	\$31,909 *	\$31,607 *	-
Persons Below Poverty (%)	14% ^	10% ^	10% ^	10% ^	<b>12%</b>

\* indicates lower than state average

^ indicates higher than state average

\*\* majority in Sioux Falls

Data from US Census, 2000



# BYPL Vanguard Center

Agriculture is the main  
economy



# BYPL Vanguard Center

- Relatively stable population
- Strong sense of community
- Diverse communities:
  - Hutterites
  - Lakota Nation
  - Ethnic groups



# BYPL Vanguard Center Population Characteristics



Characteristic	Brookings	Yellow Medicine	Pipestone	Lincoln	Total
High School Graduates	90% ^	82% *	78% *	80% *	<b>85%</b>
Bachelor's Degree	32% ^	14% *	14% *	14% *	<b>23%</b>
# of Elementary Schools	7	4	6	2	<b>19</b>
# of Secondary & High Schools	8	3	3	3	<b>17</b>
# of Religious Institutions	49	32	31	25	<b>137</b>
Affiliated with a Church	61%	91%	99%	93%	<b>77%</b>

\* indicates lower than state average

^ indicates higher than state average

Data Source: *Religious Congregations & Membership in the US & US Census, 2000*



# BYPL Vanguard Center Challenges



...where the women are strong,  
the men are good-looking,  
and the children are all above-average

Garrison Keilor, "Lake Wobegon"

