An **UNTAPPED** Resource in the Nursing Workforce?
LICENSED PRACTICAL NURSES who **TRANSITION** to
Become Registered Nurses

Cheryl B. Jones, PhD, RN, FAAN
Professor of Nursing, UNC-CH

Acknowledgements…

- Co-Authors: Mark Toles, PhD, RN
                  George Knafl, PhD
                  Anna Beeber, PhD, RN

- Colleagues: Drs. Erin Fraher & Janet Freburger; Katie Gaul; Molly McCollum; **Madeline Neal**

Overview . . .

- Motivation for this study
- Study aims and methods to examine LPN-to- RN transitions
- Analyses and findings
- Sense-making
  - Our findings relative to what's going on in healthcare and beyond
  - What do you think?

Motivation . . .

- **The IOM *Future of Nursing* Report:**
  - Increasing the percentage of RNs with a baccalaureate degree to 80% by 2020
- **The ACA**
  - Proposed new models of care for nurses of all educational backgrounds
- **Broader view of the workforce and opportunities**
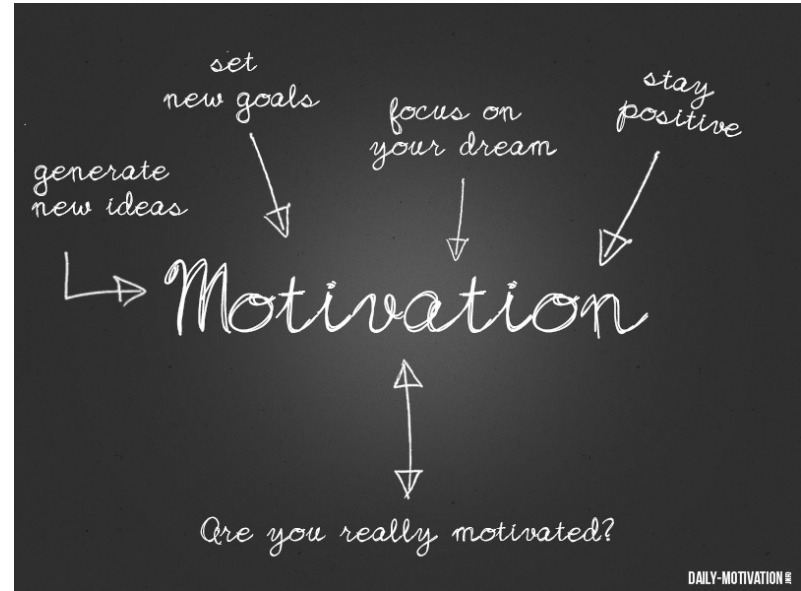
How I came to study LPN transitions

□ Curiosity. . .and a call from the field for. . .

a) Nurses to practice in emerging models of care: preventive care, care coordination

b) Diversity in the nursing workforce

c) Shortage? Surplus? Equilibrium? Regardless, need approaches to address geographic maldistribution of the workforce, esp. rural areas

Others were interested. . .

- In 2014, the Foundation for Nursing Excellence in NC had convened a workgroup for a feasibility study
  - Nursing Programs
  - NC Area Health Education Center (AHEC)
  - NC Board of Nursing (NCBON)
  - Members of the NC Community College System
- Gathering information from LPNs (interests), educators, employers, and leaders from other states (need).
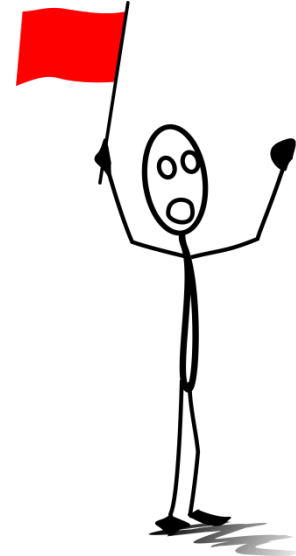
LPNs . . .

- Largely overlooked sector of the nursing workforce
- More diverse group than RNs
- Many work outside of hospitals and in underserved areas
- Have clinical, task-related experiences
- Need training for the broader scope of RN care, e.g., patient assessment, planning of care, etc.

Research on LPNs is lacking. . .

- LPN-to-RN transitions
  - How they transition, advance education
  - The timing of their transitions
  - Their career trajectories
  - Temporal aspects that might explain how nurses' lives and practice have changed
- Policy-makers, regulators need research to guide educational policies, and develop programs aimed at expanding access to health care

LPN-to-RN transition . . .

Represents a potential 'win-win' solution: provides an opportunity to expand and enhance the RN workforce, and create a meaningful career ladder for LPNs to advance their professional ability, increase their income, and contribute to their communities

Our study therefore . . .

Examined LPN-to-RN transitions by . . .

- Describing the occurrence of LPN-to-RN professional transitions using NC data
- Comparing demographic, professional and geographic characteristics of LPNs who did and did not make professional transitions
- Evaluating professional and geographic characteristics of LPNs who transitioned in the year before and the year of transition

Methods . . .

- Retrospective longitudinal design to examine LPN transitions between 2001-2013
- Data from the NC Health Professions Data System
  - Cecil G. Sheps Center for Health Services Research, UNC-CH
  - Series of annual datasets containing LPN information obtained from the NCBON, beginning with initial licensure
    - Licenses renewed biennially, NCBON updates annually
  - Individual records are linkable
  - Histories of educational achievement, employment, marital status, and other relevant variables were constructed from information in annual records

More on methods . . .

- Used annual LPN data from 2000 to 2013 to examine transitions between 2001 and 2013
- Developed a "concatenated" dataset
- Used logistic regression to predict likelihood of making LPN-to-RN transition

Study Variables

Estimated models of the form,

$$T = f\,(D, E, P, G \text{ characteristics}) ,$$

where

T = LPN-to-RN professional transition

D = demographic characteristics (gender, race, ethnicity; age at first licensure as LPN)

E = educational characteristics (year of first licensure as LPN; origin of nursing degree (i.e., in/outside US); highest degree in nursing in last year as LPN

P = professional characteristics in last year as LPN (work setting, specialty, employment status)

G = geographic characteristics in last year as LPN (geographic location, Area Health Education Center (AHEC) region)

NC Statistics for Context

- About 105,000 RNs and 17,500 LPNs
  - 18% of RNs and 36% of LPNs are non-white
- About 36% of NC's population is non-white
- In 2014-2015, 22 NC community colleges offered LPN-to-RN educational pathways
  - No state-supported BSN programs offered such option

Results

Occurrence of LPN-to-RN Transition

❑ Out of 39,398 LPNs in NC between 2001 and 2013:

    ❑ **3,162** LPNs (8.0%) had a professional transition to become an RN

    ❑ **1,617** LPNs (4.1%) reported being licensed as RNs for all years of the study period (these observations dropped from subsequent analyses)

❑ The number of LPN to RN professional transitions ranged from **190** to **336** – on average, **~1.4%** of licensed LPNs – per year
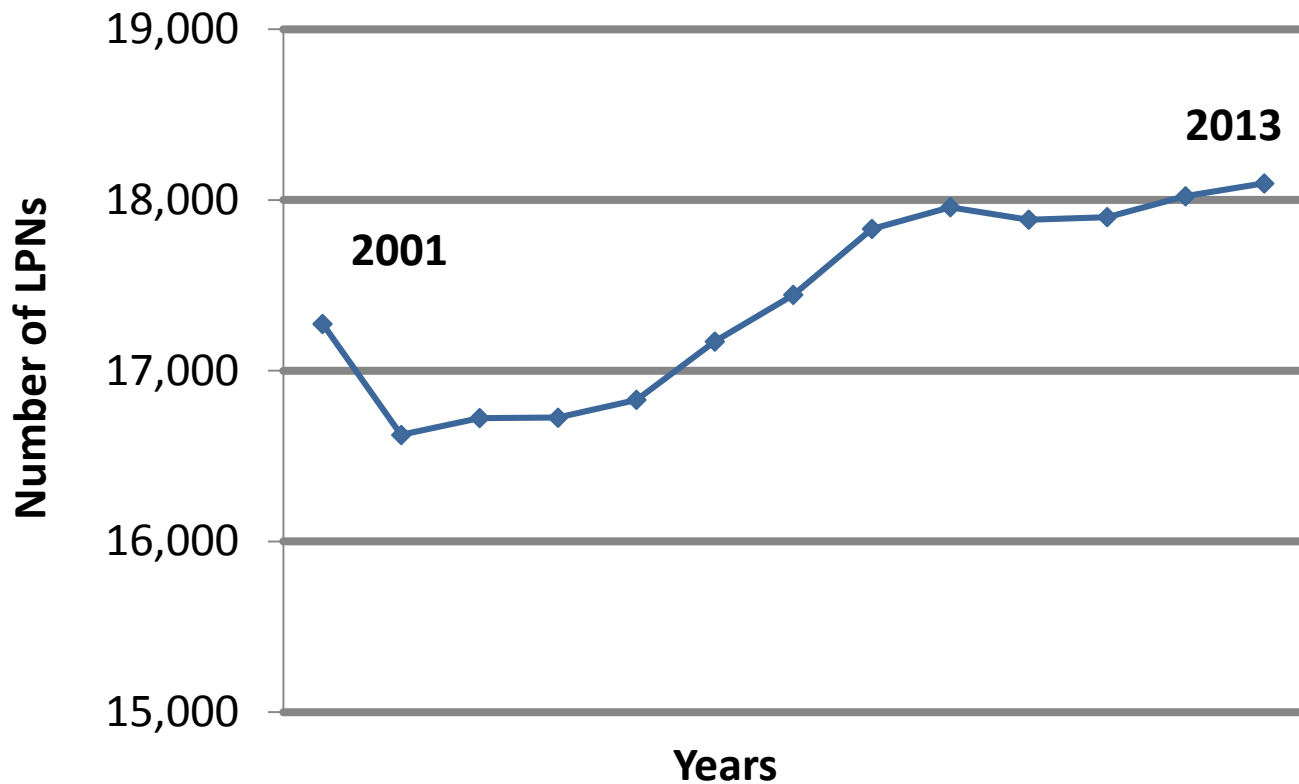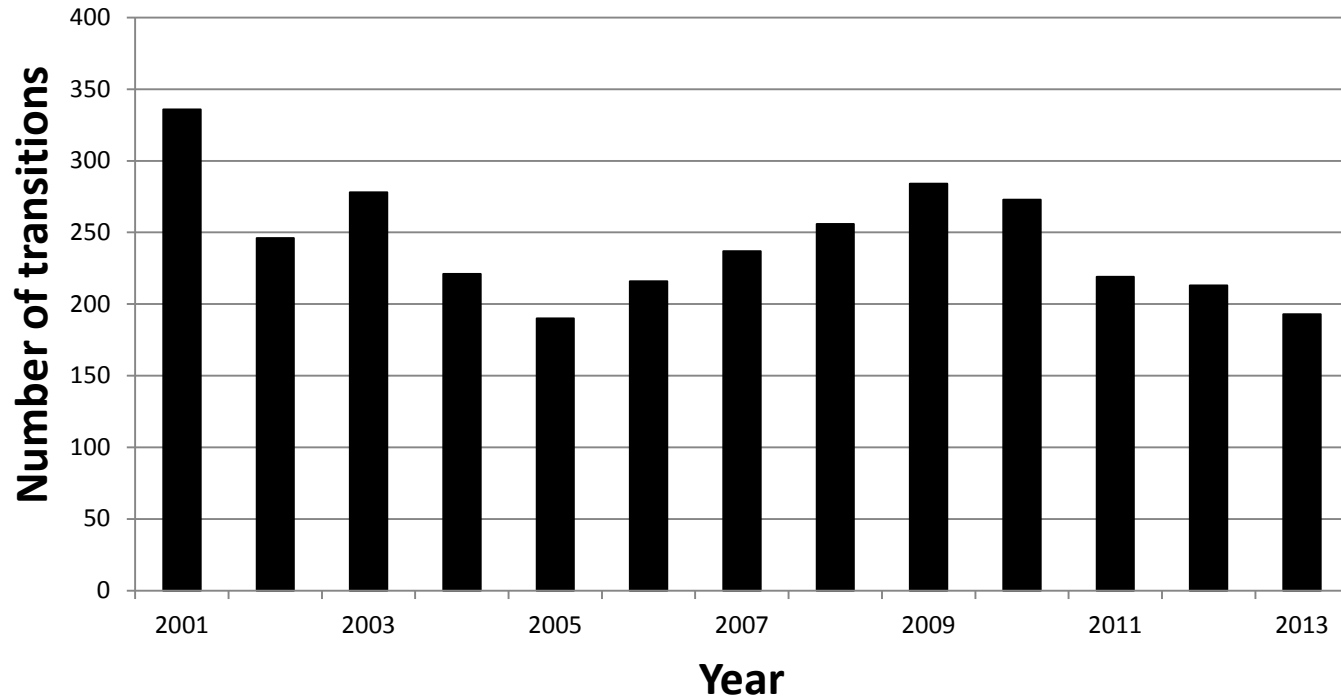
Number of LPNs in NC, 2001-2013

Figure: Occurrence of LPN-to-RN Transitions
2001-2013

About those who transitioned . . .

❑ LPNs who transitioned to become RNs were:
- ❑ Female (92.5%)
- ❑ White (67%) or Black (25.2%)
- ❑ Educated in the U.S. (98.4%)
- ❑ Licensed as a LPN between 1996 and 2013 (78.2%)
- ❑ Were between the ages of 16 and 34 years old at the time of LPN licensure (80.4%)

Their educational backgrounds, where they lived and worked . . .

❑ In the last year before transitioning, the majority of LPNs:

- ❑ Held a nursing diploma as the highest nursing degree (81.8%),
- ❑ Worked in long term care (40.9%)
- ❑ Specialized in geriatrics (36.2%)
- ❑ Worked full-time (73.4%)
- ❑ Worked in urban (versus rural) settings (69.0%)
- ❑ Worked in the Mountain, Southern Regional, Eastern, Northwest, Charlotte, and Wake AHEC regions (80.3%)

When we compared LPNs who did/did not make the transition…

❑ The odds of **male** LPNs transitioning to become an RN were 1.20 times greater than female LPNs

❑ Compared to LPNs who were white, the odds of a LPN to RN transition were greater for LPNs who were:

    ❑ Asian (2.16)

    ❑ American Indian (1.48)

    ❑ Black (1.09 times)

    ❑ Hispanic LPNs were about equally as likely as white LPNs to transition

Table: Odds on Transitioning by Gender, Race, and Ethnicity

Variable	n[a]	Values	All LPNs n (%)	LPN Only n (%)	Became RN n (%)	OR[b]	95% CI[b]	P-value[b]
Gender	37,779	Female	35,356 (93.6)	32,432 (91.7)	2,924 (8.3)	--		
		Male	2,423 (6.4)	2,186 (90.2)	237 (9.8)	1.20	1.05-1.38	0.009
Race and ethnicity	37,469	White	26,230 (70.0)	24,118 (91.9)	2,112 (8.1)	--		
		Black	9,153 (24.4)	8,357 (91.3)	796 (8.7)	1.09	1.01-1.20	0.033
		American Indian	532 (1.4)	471 (88.5)	61 (11.5)	1.49	1.14-1.96	0.004
		Hispanic	538 (1.4)	496 (92.2)	42 (7.8)	0.98	0.71-1.34	0.878
		Asian	365 (1.0)	307 (84.1)	58 (15.9)	2.18	1.64-2.89	<0.001
		Other	651 (1.7)	566 (86.9)	85 (13.1)	1.73	1.37-2.18	<0.001

More from our comparisons . . .

❑ LPNs licensed at a younger age (< 35) were more likely to transition

❑ LPNs working in a hospital in-patient setting during their last year as an LPN were more likely to transition to become an RN than those employed in all other settings

  ❑ 2.67 times more likely to transition than LPNs working in LTC

❑ LPNs working in the medical-surgical specialty during their last year as an LPN were more likely to transition that all other specialties, including community based practice and geriatrics

  ❑ Those in the geriatric specialty accounted for the greatest number of transitions, but those working in the medical-surgical area were 3.13 times more likely to transition

Also…

- ❑ Those working in part-time were 1.31 times more likely to transition
- ❑ Those working in rural areas were 1.26 times more likely to transition than those not working in rural areas
- ❑ LPNs from certain AHEC areas were more likely to transition to become RNs than those from other areas

Finally . . . the characteristics of LPNs that were most likely to change in the year following RN licensure

Professional characteristics

- Settings: Shifted from working in solo/group or hospital out-patient work settings

- Specialty: Shifted from working in community-based practice specialty

- Employment status: Shifted from working full time

Geographic characteristics

- Location: Shifted from working in a rural setting

Discussion…

- Very little is known about the factors that affect LPN-to-RN educational transitions
- This study represents observations from one state that helps us better understand:
  - Who makes the transition, and
  - Their backgrounds

Summary of findings

LPNs who became RNs (vs. those who did not) were more likely to be:

- Male
- Non-white
- Licensed at a younger age
- Working:
  - In hospital inpatient settings
  - In medical-surgical specialties
  - Part-time
  - Rural areas

Thinking about our findings from a conceptual standpoint . . .

- Structural
  - Employment (in hospitals, medical-surgical areas)
- Social or Cultural
  - Males, non-whites
  - Licensure at a younger age
  - Rural

Policy implications

- This study sheds light on an understudied segment of the nursing workforce: LPNs
- Can aid in the examination of transitions in the LPN workforce in other states and regions
  - Isolated factors that impact LPN-to-RN transitions, and provides information that regulators and educational programs can consider as they set and shape nursing education-related policies.

To encourage transitions in the LPN workforce:

- Provide incentives for LPN-to-RN transitions
  - <u>Individuals</u>:
    - Target prior to entering and during their LPN education
    - Encourage the transition of LPNs from diverse backgrounds
  - <u>Programs and regulators</u>: Educate nursing leaders, faculty and program leaders about LPN-to-RN advancement opportunities
  - <u>Employers</u>: Provide work flexibility, tuition reimbursement
  - Target all groups to fill gaps in community-based, ambulatory, and primary care, and along the full continuum of care that extends from home to long-term care services; doing so may, in turn, build local communities

Policy implications . . .

- Provide resources to support advancement along the nursing career ladder
  - Boards of nursing, educational programs, and professional leaders can create innovative and integrated curricula for nurses to advance along a career trajectory
    - LPN >> ADN >> BSN
    - LPN >> BSN
    - ADN >> BSN programs
    - Accelerated doctoral programs
  - Promote and envision the value of nurses prepared at and from *all educational backgrounds* to encourage their transition

Future research . . .

- Identify the barriers to and facilitators of LPN-to-RN transitions
- Better understand the modifiable policy levers that would accelerate them
- A larger effort is needed to truly understand the LPN workforce
  - Other states and regions
  - A national sample would be ideal – where are these data?
  - Multivariate modeling

Questions that keep me up at night

- ❑ **What can explain the transitions and shift?**
    - ❑ If they shifted from Solo/group practices, where did they go?
- ❑ **What are the barriers and facilitators to making an LPN-to-RN transition?**
    - ❑ Personal
    - ❑ Program
    - ❑ Employer
- ❑ **How do LPNs' careers transition within the context of life course theory?**
- ❑ **We have done similar analyses examining RN educational and career transitions in NC . . . more on that to come!**

Parting thoughts . . .

Looking to the future . . .

Critical time for nursing

> **Nurses and nursing have an incredible opportunity to radically change healthcare**

A person who never made a mistake never tried anything new . . .

A. Einstein

Sense-making

- What do you make of all this?
- What surprised you?
- What do we still need to know?
- What action should be taken and by whom?