CHALLENGES AND OPPORTUNITIES IN NURSE CREDENTIALING RESEARCH DESIGN

MATTHEW D. McHUGH, PhD, JD, MPH, RN, FAAN

The Rosemarie Greco Term Endowed Associate Professorship in Advocacy
Robert Wood Johnson Foundation Nurse Faculty Scholar
Associate Director, Center for Health Outcomes & Policy Research

University of Pennsylvania School of Nursing

Present questions and issues for researchers and other stakeholders to consider in carrying out sound research that helps to understand nurse credentialing and its relationship to outcomes.
WHAT DOES THE CREDENTIAL REPRESENT?

Human Capital Theory

• Credentialing not only signals underlying differences but promotes them

• Questions:
  • *If we invest in and promote credentialing, what are the results and to whom do any benefits accrue?*
  • *Should we promote and finance credentialing as a public good?*

Signaling Theory

• The credential is a marker of underlying characteristics that distinguish those who pursue and attain credentials

• Questions:
  • *How can we use credentialing to inform efficiency and better health care quality?*
WHAT DOES THE CREDENTIAL REPRESENT?

It is likely not purely one or the other scenario…

• The credential probably signals a baseline level of performance and presence of requisite traits

• The balance between these two factors likely varies across institutions and credentialing programs.

• Both are likely relevant to acquiring a credential and, to different degrees, account for any observed outcomes differences.

• This tension is at the forefront of the credentialing research challenges
IS THERE A CAUSAL LINK?

Credentialing at both the individual and organizational level is largely voluntary.

Improving our ability to make causal claims must be a primary focus.

Although RCT not an option, additional observational methods can be increasingly utilized.

- **Regression** (Lake et al. 2010. *Research in Nursing & Health.*)
- **Instrumental variables (IV)** (Jayawardhana, et al. 2014. *Medical Care.*).
- **Longitudinal including counterfactual testing** (Jayawardhana et al. 2014. *Medical Care.*; McHugh et al. 2013. *Medical Care.*)
ARE WE STUDYING THE SAME THING?

Extraordinary variety of individual credentials

Usually requires fill-in boxes in data collection

• Questions:
  • *Which credential or type of credential affects outcomes?*
  • *Are there particular aspects of credentialing that deliver the greatest outcomes differences?*
An understanding of mechanisms clarifies theories of causal relationships, linking how we think the world works with evidence about what is actually happening and supports a causal relationship.

- Do those with a credential do something different that leads to better outcomes? If so, what specifically, and is it logical?

- At what level does the effect operate? (i.e., Does it take a critical mass of credentialed nurses to influence outcomes, regardless of any individual nurse’s credentialing status?; Kendall-Gallagher et al., 2011; Kendall-Gallagher and Blegen, 2009; Newhouse et al., 2005)

Test mechanism in different contexts (different settings, international)
MECHANISM EXAMPLES

Witkowski et al. (2014). *Journal of Nursing Administration*.

- Matched Magnet to otherwise similar non-Magnet hospitals. Show that nurse reported quality of care significantly better. Then show that differences in nurse work environment (a factor at the core of the Magnet hospital), largely explain the effect.

McHugh et al. (2013). *Medical Care*.

- Used detailed information on organizational nursing characteristics (e.g., nurse work environment, staffing) and showed that mortality and failure to rescue advantage in Magnet compared to non-Magnet hospitals accounted for in part by differences in nursing.
Design Alone Cannot Provide Answers

Data

• There are no systematic standardized data on individual nurse credentialing.
• Most surveys start from scratch.
• HR systems may not capture and if they do, limited.
• Integration of credentialing information into data systems is an opportunity for researchers but also for clinical quality improvement.
Design Alone Cannot Provide Answers

Funding

• Significant funding for credentialing research is virtually non-existent.

• New funding strategies are necessary to carry out the kind of research we have discussed.
WHERE TO NOW?

• Opportunities to evaluate credentialing in new areas post-ACA. For example:
  • Value-based purchasing outcomes
  • Optimal workforce configuration

• New questions to be answered:
  • What are the cost and financing implications of credentialing for various stakeholders? Is it worth it?
  • How can any identified benefits of credentialing be spread to organizations or individuals not historically pursuing credentialing?
  • What should the credentialing programs of the future look like in order to get the best outcomes?