2020 VPCAT Reviewer Critiques Sheet

Applicant Name: Jenny Alderden, PhD, APRN
Project Title: Preventing pressure injuries among critical-care patients through risk stratification, tailored interventions, and real-time clinical decision support

CRITIQUE 1

1. Career Plan: 2
2. Scientific Mentoring Plan: 1
3. Research Plan: 1
4. Institutional Support: 1
5. Applicant’s Overall Potential: 1

1. Career Plan

Strengths
- Statement of career plan is concise – prevent pressure injuries among critical care patients through risk stratification, tailored interventions and real-time clinical decision support
- The candidate has an outstanding mentor and co-mentor along with clear support from the Dean of the School of Nursing. There is an established relationship as a mentee and research collaborator with the mentor which demonstrates a commitment.
- The career plan is well suited to a path for submission of a career development award which seems to be the logical next step for this candidate based on her existing track record of accomplishments including participation in research projects and publications.

Weaknesses
- Statement of career plan might be somewhat narrow in its scope.
- Other important aspects of career plan including participation in national committees, establishing additional research collaborations, seeking opportunities to present work at other institutions, developing mentees – all of which work towards building a national/international reputation are not specifically identified.
- More clearly identify plans to develop relevant methodologic expertise such as in machine learning.

2. Scientific Mentoring Plan

Strengths
- Dr. Mollie Cummins is an international leader in the field of informatics applications, has an extensive track record for funded investigation and successfully mentoring trainees. The mentor has expertise in the methods for which the candidate proposes to develop expertise including machine learning.
- The mentor has clearly defined her role including commitment to regular meetings with the candidate. This will also allow ongoing evaluation of progress.
• The mentor and mentee have an established track record of collaboration which includes 6 peer-reviewed publications.
• The candidate has identified plans to continue with funded areas of research and to pursue a career development award with a K01.

Weaknesses
• The specifics of a plan to address any changes in the effort available for research is not outlined but the mentor and dean of the school or nursing have both addressed this potential issue and state a commitment to ensuring adequate time for research.

3. Research Plan

Strengths
• Candidate has identified two key domains – an informatics research objective and an intervention research objective within which planned investigations will occur.
• Planned studies are original but a strength is they build upon an established research infrastructure.
• The research aims proposed clearly fit into the framework of a long term goal which is to prevent hospital-acquired pressure injuries by advancing the methods to detect, risk-stratify and deploy interventions designed to mitigate risk for these injuries.
• The candidate has demonstrated that this is a clinical problem of major significance and has identified gaps in the ability to adequately risk stratify patients in order to efficiently allocate time-intensive interventions to those patients at highest risk. The proposed aims build on each other in a logical fashion and are appropriate to the long term career plans and the candidate’s current career stage.

Weaknesses
• It is not clearly evident which facets of the stated research plan would be conducted in the near term or proposed via future grants such as to the Department of Defense or a K01 Award.

4. Institutional Support

Strengths
• There is clear commitment to the candidate’s research trajectory and adequate protected time for research with stated commitment of at least 40% FTE and this amount is currently higher.
• The candidate’s two identified mentors (primary and co-mentor) along with the Dean of the College of Nursing clearly are familiar with the candidate’s work and long-term goals.
• The institution agrees to ensure the candidate may attend all required VPCAT activities and the Dean of the College of Nursing commits to address any problems that may arise with encroachment of non-research responsibilities onto necessary research time.
• The candidate is provided all of the necessary resources for success including a strong mentoring team, office and supplies and an appropriate balance of activities between research, teaching and service for a junior faculty member.

Weaknesses
• The currently proposed research effort of 55% may need to be increased should the candidate successfully compete for a K Award. How the balance of research, teaching and service will be rebalanced was not addressed.

5. Applicant’s Overall Potential

Strengths
• This candidate demonstrates strength in all of the domains of evaluation including an outstanding career and scientific mentoring plan and team, an outstanding research plan and clear institutional support. This candidate has already established successful collaborative relationships with her mentoring team and has a strong track record of accomplishments for this career stage.
### Weaknesses
- More clearly identify how the balance of research, teaching and service would be adjusted if she receives a K Award. Also more explicitly demonstrate a plan for networking and development within her field through opportunities outside of the University.
- Better elucidation of the career development plans focused on attaining methodologic expertise (such as with machine learning) would be valuable, especially for when submitting a career development award.

### Reviewer Comments
(None noted)

### CRITIQUE 2

1. **Career Plan:** 2
2. **Scientific Mentoring Plan:** 2
3. **Research Plan:** 4
4. **Institutional Support:** 1
5. **Applicant’s Overall Potential:** 2

#### 1. Career Plan

**Strengths**
- Career goals focused on developing expertise in risk modeling and informatics in order to prevent hospital acquired complications such as pressure ulcers. This is a natural extension of both her clinical work and research over the past decade.
- Relevant clinical background in critical care nursing (including experience serving in a military platoon and as a flight nurse) prior to completion of PhD work in 2017.
- History of extramural research support from nursing society (PI) and R01 (co-I), as well as recent DOD grant that was submitted.
- Applicant with history of successfully attained competitive training opportunities as an NIH T-32 pre-doctoral award and Hartford scholarship

**Weaknesses**
- More details are needed to clearly define career development goals and skills that are needed to become an independent investigator

#### 2. Scientific Mentoring Plan

**Strengths**
- Combination of very strong mentorship team with expertise in clinical decision support/informatics (Dr. Cummins) and pressure injury prevention (Dr. Yap).
- Strong record of collaboration with her scientific mentors Dr. Cummins and Dr. Yap. Dr. Alderden has published 6-7 papers with Dr. Cummins and submitted a recent DOD grant together. In addition, she is co-I with Dr. Yap (Duke) on a recently funded R01 grant focused on preventing pressure ulcers.

**Weaknesses**
- Having a scientific co-mentor (Dr. Yap) outside the University is a limitation, but is likely minimized given history of collaboration and value of content expertise.
3. Research Plan

**Strengths**
- Research plan is a natural continuation of prior research efforts in field of hospital-acquired pressure injuries (HAPI).
- HAPI is a high-impact clinical topic that is a focus of funding agencies such as AHRQ.
- Already has some preliminary data to support aim 2.

**Weaknesses**
- It’s unclear from research plan how the risk prediction models will be validated and what source of external data will be used.
- Research plan does not address how applicant plans to translate output from risk prediction models into clinical decision support tools.

4. Institutional Support

**Strengths**
- Dr. Alderden has 55% protected time commitment for research from the College of Nursing, which includes 5% effort on R01 with mentor.
- Strong letter of support from College of Nursing Dean with guarantee to protect time needed for all VPCAT, research, and career development activities.

**Weaknesses**
- None found

5. Applicant’s Overall Potential

**Strengths**
- Applicant is at an appropriate point in her career to benefit from VPCAT, and has record to indicate that she will be successful becoming an independent investigator.
- Has a long record of successful collaboration with her primary scientific mentor Dr. Cummins, who also served as a mentor during her PhD dissertation work.

**Weaknesses**
- It was somewhat unclear whether the applicant was planning to focus on preparing a K01 career development grant during the VPCAT as opposed to the DOD grant that was already submitted.

Reviewer Comments

(None noted)