Improving Access to Care through the Integration of the Nurse Practitioner Role in a Saudi Arabian Primary Care Department

Changing Healthcare through the Role of the NP

ANGELA WILKINS-BASSETT, DNP, MPH

10TH ICN/APN CONFERENCE ROTTERDAM
# Disclosure presenter

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>No (potential) conflict of interests</td>
</tr>
<tr>
<td>✗</td>
<td>1. Relations that could be relevant for the meeting</td>
</tr>
<tr>
<td>✗</td>
<td>2. Sponsorship or research funds</td>
</tr>
<tr>
<td>✗</td>
<td>3. Payment or other (financial) remuneration</td>
</tr>
<tr>
<td>✗</td>
<td>4. Shareholder</td>
</tr>
<tr>
<td>✗</td>
<td>5. Other relation</td>
</tr>
</tbody>
</table>
Background

- Access to primary care is a global dilemma

- Delay in access to primary care greatly impacts population health (Shi, 2012; Rao & Pilot, 2014)

- Nurse practitioners (NPs) improve access to care in many parts of the world today (Poghosyan and Aiken, 2015)
Local Significance
Kingdom of Saudi Arabia (KSA)

- Primary care physician shortage in KSA (Al Khaldi et al, 2017)

- ↑ Burden of disease from NCDs (WHO, 2014)

- NPs’ scope not recognized in KSA

- Saudi Vision 2030- focus on nursing (Bassi, 2016)
Pilot Project

- Spearheaded by nursing department 2015
- Introduction of the NP role in KSA
- Outcome measurement
- Long-term goal: expansion of NP role to KSA nurses and avenue for educational advancement
Problem Statement

Meeting the demand of a busy primary care clinic in Saudi Arabia due to high walk-in demand, increasing patient population, provider shortage, and patients’ health complexity.

Figure 1: % of patients seen without appointment

<table>
<thead>
<tr>
<th>Year</th>
<th>Walk-in Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>20%</td>
</tr>
<tr>
<td>2014</td>
<td>22%</td>
</tr>
<tr>
<td>2015</td>
<td>28%</td>
</tr>
<tr>
<td>2016</td>
<td>29%</td>
</tr>
<tr>
<td>2017</td>
<td>29%</td>
</tr>
</tbody>
</table>

Primary Care Department 2017

- Walk-in Visits
- Scheduled Appointments
## Improving Access through Evidence-based Interventions

### Integrative Review

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Research Findings</th>
<th>Analysis</th>
</tr>
</thead>
</table>
| Small Medical Appointments | • Improves access  
                          • High patient satisfaction with innovation                                      | • Innovated strategy for specialty care or chronic care within primary care settings.     |
| Telephone Triage      | • Improves access with decrease in face-to-face consultations                   | • Further research needed looking at long-term health care utilization.                     |
| Walk-in Clinic        | • High patient satisfaction, reduction in healthcare utilization, safe and quality care | • APN role in walk-in setting improves access to care through productivity, patient satisfaction, and quality care. |

(DeVries et al, 2008)
(Villasenor & Krouse, 2016)
(McKinstry et al, 2009; Campbell et al, 2015)
# Project Overview

Demonstrate the feasibility of improving access to care through the integration of the NP role in a busy Saudi Arabian primary care department walk-in clinic

<table>
<thead>
<tr>
<th>Aim 1:</th>
<th>Increase Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim 2:</td>
<td>Provide high-quality and safe primary care</td>
</tr>
<tr>
<td>Aim 3:</td>
<td>Adoption of a transition to practice model applicable to setting</td>
</tr>
</tbody>
</table>

**Intervention:**
1. Integrate the NP role into a Saudi Arabian clinic
2. Measure impact
Ottawa Model of Research Use

(Graham & Logan, 2004)
## Methods and Implementation

<table>
<thead>
<tr>
<th>Design</th>
<th>Quality improvement project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods</td>
<td>Measurable outcomes to demonstrate improved access-productivity, quality of care, and healthcare utilization</td>
</tr>
<tr>
<td>Analysis</td>
<td>( \text{Chi}^2 ) and independent sample T-test comparing NP to usual care.</td>
</tr>
</tbody>
</table>
Outcome Results
Aim 1: Increase Productivity

- Busy walk-in clinic, 2 MDs, 1 NP
- Comparable productivity to usual care
- NP accounts for 82% of MD volume

Figure 2: Productivity of NP, MD 1 and MD 2 in walk-in clinic
Outcome Results
Aim 1: Increase Productivity

- Lower healthcare utilization in NP group
- Fewer patients returned to clinic or EMS within week of seeing NP as compared to usual care.

![Healthcare Utilization Chart](Image)

*Figure 3: Percentage of total healthcare utilization of NP and MD*

<table>
<thead>
<tr>
<th>Variable</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs</td>
<td>0.23</td>
</tr>
<tr>
<td>Referrals</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>X-Rays</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>EMS</td>
<td>0.011</td>
</tr>
<tr>
<td>RTC</td>
<td>0.011</td>
</tr>
</tbody>
</table>

*Table 1: Statistical significance of healthcare utilization comparing NP and MD groups*
Outcome Results

Aim 2: Provide high quality care

- 80 chart audit by 1 MD resulted in 100% safe and appropriate care
- 94% patient satisfaction from independent surveys
- 83.5% overall satisfaction from Press-Gainey

**Figure 4**: Press-Gainey Satisfaction NP vs Primary Care Mean

**Figure 5**: Walk-in clinic administered satisfaction survey
Outcome Results

Aim 3: Adopt transition to practice model

- Value in professional practice model tailored to NPs (Woolforde, 2012; Elliott & Walden, 2015)

- Supports role development and professional development (Elliott et al., 2017)

- Adapting current nursing orientation to include NP-specific needs
Transformational Advanced Professional Practice Model (TAPP) shown to be an effective Professional Practice Model (PPM) specifically for NPs:

- role transition and professional development
- professional practice model based on clinical and professional competencies
- benefit new graduates and experienced NPs transition to new practice

(Elliott & Walden, 2015)
Limitations

- Potential bias - triage system, patient preference based language and culture preferences and barriers

- Timing of project included Ramadan which impacted productivity

- Unable to compare quality of care measures to physician care

- Single site, one NP (independent variable)
Conclusion

- NPs improve access to care through variety of roles

- Pilot project outcomes impact not only patient care but future of nursing in KSA

- The utilization of a professional practice model can guide the expansion of the NP role
Moving Forward

- Expanding pilot project through hiring additional NPs and avenue for advanced education
- Work with Ministry of Health to establish NP role and scope of practice outside pilot project
- Continue to integrate professional practice model within healthcare organization
- Continue to support the evolving role of nurses as part of Saudi Vision 2030
Thank you

JHUSON and JHAH Staff
Zeina Khouri-Stevens, RN, PhD
Sharon Dudley-Brown, PhD, FNP
Amani Babgi, PhD
Dr. Saeed Qahtani
Dr. Wail Malaty
References


