NEED AND READINESS FOR A NURSE PRACTITIONER-PARAMEDIC UNIT IN RURAL YUMA, ARIZONA

by

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As members of the DNP Project Committee, we certify that we have read the DNP Project prepared by Katherine Marie Gompert entitled "Need and Readiness for a Nurse Practitioner-Paramedic Unit in Rural Yuma, Arizona" and recommend that it be accepted as fulfilling the DNP Project requirement for the Degree of Doctor of Nursing Practice.

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Final approval and acceptance of this DNP Project is contingent upon the candidate's submission of the final copies of the DNP Project to the Graduate College.

I hereby certify that I have read this DNP Project prepared under my direction and recommend that it be accepted as fulfilling the DNP Project requirement.

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Finally, to my Lord, Jesus, through whom all things are possible, to him be the glory forever, and ever.

DEDICATION

This manuscript is dedicated to the brave men and women of not only Yuma Area Fire Departments but to the emergency room nurses of Yuma Regional Medical Center. Daily you risk your lives, experience tragedy and joy, carry immense responsibility, encounter challenges and situations that anyone else could not manage, and at the end of it you come back day after day because of your dedication to the individuals you care for and serve. It has been an honor and a pleasure to work alongside you these past few years.

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ABSTRACT

Background: The expansion of health care coverage, overuse, misuse, and overcrowding of emergency departments, inappropriate use of emergency medical services, and issues pertaining to rural dwelling, call for the development of new models of care to improve patient outcomes, bridge care gaps, and meet community needs. One such model that may be instrumental in overcoming these issues it that of the Nurse Practitioner-Paramedic Unit (NPPU).

Purpose: This doctor of nursing practice project comprises a needs and readiness assessment with input from key stakeholders regarding resources required and the need for a NPPU in Yuma, Arizona. The ultimate goal of this needs and readiness assessment is to inform the future development of a new model of care, the NPPU for Yuma, Arizona.

Methods: Surveys were distributed via Qualtrics to 86 individuals to include local physicians, nurse practitioners, and paramedics, amongst others. The survey contained nine open-ended questions to inform the future development of a NPPU. A total of 17 completed surveys were submitted between 9/11/16 to 10/9/16. Response were grouped by question number and analyzed for themes.

Results: Eighty-two percent of respondents felt that a NPPU was needed in Yuma, Arizona. Respondents identified more benefits than negatives of an NPPU. Resources needed were identified to include hospital buy-in, provider trust and buy-in, coordination between the hospital and fire departments, medical equipment, transport vehicle, funding, scheduling, and education. The most common care situations considered appropriate for a NPPU were identified as low acuity (47%), transitional care and/or chronic health issues (35%), and behavioral health (29%). The importance of protocols was noted by 65% of respondents. 94% of respondents

expressed that an NPPU would increase patient satisfaction. Improved patient outcomes due to an NPPU was identified by 24% of respondents. Overall, 94% of respondents stated that they would support an NPPU and were interested in being part of a working group.

Conclusions: The results of this project support the need for a NPPU by stakeholders in the community and will guide the future development of an NPPU for Yuma.

INTRODUCTION

Background

Health care needs of at risk and vulnerable rural communities have led to the development of models such as transitional care, mobile integrated health care, nurse practitioner-paramedic units, and community paramedicine programs, amongst others. These models are designed to bridge the gap in local infrastructure which are numerous issues within rural communities.

The expansion of health care coverage and an aging and increasing population place growing demands on an already taxed primary care system (National Governors Association, 2012). Increasing population to include aging populations are estimated to cause 81 percent of the increased primary care demand between 2010 and 2020 (Health Resources and Services Administration, 2013). The provisions under the Affordable Care Act to include the increase of health insurance coverage and state expansion of Medicaid, account for the additional demand on primary care services (HRSA, 2013). Primary care provider shortages also pose a problem. It is estimated that to eliminate primary care provider shortages at least 44,000 new providers will be necessary by 2035 (Petterson, Liaw, Tran, & Bazemore, 2015).

Overuse, misuse, and overcrowding of emergency departments (EDs) are all too common issues. Overuse of ED services is estimated to cost 38 billion dollars annually (Adams, 2013). While ED misuse and overcrowding have been long-standing issues, the number ED visits in the United States have risen to an estimated 134 million annual visits from 44 million annual visits in 1968 (Adams, 2013). Approximately 13-27% of ED visits could be appropriately managed by

primary care and/or urgent care clinics, resulting in a 4.4-billion-dollar annual savings (Enard & Ganelin, 2013).

Emergency Medical Services (EMS) is an additionally taxed system that is overused and misused. EMS personnel provide prehospital care through treating and transporting more than 15% of the 18 million patients they see annually (Meisel et al., 2011). Many of these individuals present with low acuity complaints (Meisel et al., 2011). The use of EMS services by non-urgent patients has numerous negative effects to include contribution to ED and hospital overcrowding and limiting the availability of EMS services to respond to emergent patients who require immediate medical care (Meisel et al., 2011).

The above issues are compounded in rural communities. Rural communities are subject to numerous health disparities. When compared to urban residents, rural residents typically are poorer, less healthy, and have less access to health care services and providers (Tabor & Howard, 2012). Compared to the general public, rural dwellers have an increased prevalence in chronic disease (National Advisory Committee on Rural Health and Human Services, 2011). Access to quality health care services is complicated by smaller health care workforces and poor infrastructure contributing to health disparities for rural communities and their residents (NACRHHS, 2011).

A nurse practitioner paramedic unit (NPPU) or nurse practitioner response unit (NPRU) offers a novel way to address these disparities. These types of units are fairly new innovations with many programs still in pilot stages, hence a lack of evaluation data and research. Present models typically consist of a Nurse Practitioner (NP) and a paramedic, outfitted in an ambulance that responds to non-emergent calls. Team approaches such as these have been shown to improve

patient care, patient self-management, reduce hospital admissions, decrease unnecessary ED visits, and improve patient outcomes all at a lower cost (NGA, 2012). Existing models include the Los Angeles, California Fire Department, the Anaheim, California Fire Department, and the Mesa, Arizona Fire Department (Davis, 2013; Smouse, 2015; West Side Today, 2015). The overall goals of these models are to treat and release low acuity patients and avoid unnecessary transport to the ED (Los Angeles Fire Department, 2015). The ultimate outcomes are to improve patient care, save lives, time, and money as well as free up emergency resources (LAFD, 2015).

Nurse practitioner-paramedic units are similar to many mobile integrated health care and community paramedicine models. Currently, there is a gap in research regarding NPPUs. In contrast, research has been done on mobile integrated health care as well as community paramedicine programs. Emergency medical services are not only integral to safety and delivery of care outside the hospital environment, but offer numerous resources, and have unique skill sets (Choi, Blumberg, & Williams, 2016). Community paramedicine and mobile integrated health care programs expand the role of paramedics to include community care. One such program, MedStar Mobile Health Program in Dallas and Fort Worth, Texas provides home visits for education and chronic disease management (Choi et al., 2016). Chronic diseases covered by the program included congestive heart failure, chronic obstructive pulmonary disease, and diabetes (Agency for Healthcare Research and Quality, 2012). When one of the patients enrolled in this program call 911, a representative from the program is dispatched in addition to EMS to determine if the patient needs to go to the ED or could be safely deferred (Choi et al., 2016). Outcomes of this program included 1,893 deferred ED transports, savings of 21,627 dollars in

Medicare charges, and a 5,536 dollar per patient payment avoidance between January 2010 to February 2015 (Choi et al., 2016).

Choi et al. (2016) present compelling data to support programs such as these. A similar program in a rural community in Nova Scotia reduced ED visits by 23% in 2002 and 2003 (Choi et al., 2016). Likewise, one program in Raleigh, North Carolina triaged greater than 300 patients to alternate facilities such as mental health and alcohol treatment centers (Choi et al., 2016). Each appropriately diverted patient saved 14 bed-hours in the ED (Choi et al., 2016).

A paramedicine program in Washoe County, Nevada provided in home care to include IV hydration and diuresis, follow-up lab work, point of care lab work, delivery of nebulizer medications, 12-lead EKGs, patient education, discharge instruction teaching, as well as alternative transport, and a nurse telephone health line. This program avoided 1,795 ED visits, 354 EMS transports, and 28 hospital readmissions, resulting in avoiding 7.9 million dollars in charges and 2.8 million dollars in Medicare payments (Choi et al., 2016).

The United Kingdom offers different models of community paramedicine delivery which not only expands the role of the paramedic but also allows paramedics to treat and discharge non urgent patients. One such community paramedicine program pilot study in the United Kingdom responded to 635 calls (Woollard, 2012). Of these 635 calls, 292 (46%) were treated by the paramedics and did not require hospital transport, 75 (12%) were transported non-emergency, and 34 (5%) were direct admission referrals (Woollard, 2012).

Evaluations of the above paramedic programs identify clear benefits to patients and health care systems. These findings suggest that adding a NP to a unit would improve patient outcomes while decreasing unnecessary and inappropriate patient transport to the ED.

Local Problem

Yuma, Arizona is a unique community. It is located in the Southwest corner of Arizona, bordering Mexico and California. The city is considered rural, with the next largest cities being at least two and a half hours drive away. Yuma is home to nearly 100,000 residents (City of Yuma, 2016). According to the 2010 United States Census, individuals under age 5 make up 7.9% of the population, individuals under 18 make up 28.2% of the population, and those over 65 years of age make up 12.7% of the population (U.S. Department of Health and Human Services: Department of Health, Education, and Welfare, 2010). Females make up approximately 49.2% of the population (United States Census Bureau, 2010). Yuma's race/ethnicity composure includes, 68.8% Non-Hispanic White, 3.2% African American, 1.8% American Indian and Alaska Native, 1.9% Asian, and 0.2% Native Hawaiian and other Pacific Islander (USCB, 2010). The percentage of individuals who live below the federal poverty level in Yuma is 17.4% (USCB, 2015). The percentage of residents in Yuma with health insurance is 17.9% (USCB, 2015). Interestingly, Yuma's population doubles during the fall and winter months (COY, 2016). This increase in population during these months is due to individuals traveling from Canada and northern states for warmer temperatures during these colder months.

Yuma Regional Medical Center (YRMC) is the only hospital and ED in Yuma, Arizona. Despite having only a 37 bed ED, YRMC is one of Arizona's busiest emergency departments, treating more than 72,000 patients annually (Yuma Regional Medical Center, 2016).

The City of Yuma is serviced by two ambulance companies, one being the Yuma Fire Department (YFD) which covers the majority of the city, and a private ambulance and fire company, Rural Metro Fire Department which covers county pockets.

I have been employed as a registered nurse in the ED at YRMC in Yuma, Arizona for over four years. My husband is employed with YFD. While working at YRMC and working closely with YFD I became increasingly aware of health care gaps present within my community. I recognized that Yuma has many similar health care issues as other cities to include ED overcrowding, ED overuse and misuse, and a lack of primary care providers, which are complicated by such a rural location. This realization led me to look at other evolving models of care to bridge the healthcare infrastructure gaps within my community.

Purpose

The purpose of this Doctor of Nursing Practice (DNP) project was to conduct a needs and readiness assessment to inform the creation of a new model of care for a nurse practitioner-paramedic unit in Yuma, Arizona. The long term outcome of this project, to be completed after graduation from the DNP program, is to finalize the development of this new model of care, create a business plan, and implement the new model of care into the COY. The new model of care would allow for the creation of a usable model that will allow for improvement in the quality of patient care, continuity of care, and appropriate resource allocation and use to improve the lives of Yuma residents.

Study Questions

1) Is a nurse practitioner-paramedic unit needed in Yuma, Arizona?
2) What resources will be required to create a feasible model for a nurse practitioner-paramedic unit specific to Yuma, Arizona?

FRAMEWORK AND SYNTHESIS OF EVIDENCE

Theoretical Framework

Knowledge to Action

The selected framework used as a tool for the readiness and needs assessment is the knowledge to action (KTA) model, developed by Graham and colleagues (Field, Booth, llott, & Gerrish, 2014). The KTA framework will also assist with the future development of a model for a NPPU for Yuma. The KTA framework was developed to assist in translating knowledge into evidence-based, sustainable interventions (Field et al., 2014). The KTA framework is comprised of two components, knowledge creation and the action cycle. These components can influence each other (Field et al., 2014). Knowledge creation is represented by an inverted funnel, with knowledge inquiry being at the top of the funnel, followed by knowledge synthesis, and then knowledge products/tools, with knowledge becoming increasingly tailored as it is filtered through the funnel (KT Clearinghouse, 2014). Any phase of knowledge creation can impact the action cycle (Field et al., 2014). Phases of the action cycle include identifying the problem/identifying, reviewing, and selecting knowledge, adapting knowledge to a local context, assessing barriers to knowledge use, then selecting, tailoring, and implementing interventions, monitoring knowledge use, evaluating outcomes, and sustaining the knowledge use (KT Clearinghouse, 2014). These phases of the action cycle may be carried out one at a time or simultaneously (Field et al., 2014). The purpose of the action cycle is to outline the processes and activities necessary for knowledge to be applied to a local context in practice as well as to assess for barriers and facilitators (Field et al., 2014). In the KTA framework the involvement of key stakeholders is essential (Field et al., 2014).

Application. The KTA framework informed and guided this needs and readiness assessment by assisting in translating knowledge into practice. Utilizing the knowledge creation funnel allows for the tailoring of knowledge to inform the development of the future model. Identifying gaps in knowledge will enlighten the needs and readiness assessment for model development. This framework will also require the identification, input, and buy in from key stakeholders. Knowledge obtained must be applied to the local context of Yuma, to include local patient population, health care providers, and fire department staff. Identifying potential barriers to include knowledge and attitudes allows for the development of strategies to overcome these barriers. Selecting and tailoring the model for Yuma will make it more apt to be successfully implemented and adopted. Without an understanding of the need and readiness of the community, the model cannot be appropriately tailored to achieve success. For these reasons the KTA framework is an ideal model to utilize in this project.

Logic Model

A logic model offers a way to depict how the program or model is intended to work and how parts are interrelated (Zaccagnini & White, 2014). There are many variations of logic models, but all are composed of inputs, outputs, and outcomes. Inputs include resources whether they be personnel, informational, financial, time, equipment, transportation, facilities, or managerial (Issel, 2014). A logic model may also describe constraints to include laws, regulations, local policy, finances, time, and culture. Additionally, a logic model may include activities which represent the use of resources needed to achieve the expected outcome. Outputs represent outcomes, to include both short-term and long-term outcomes, and their impact (Zaccagnini & White, 2014).

Application. The logic model allows for the examination of problem root causes, development of strategies to target the specific problem, and to evaluate the produced change (Renger & Renger, 2007). Thus far we have examined root causes leading to the need of a NPPU. Specifics to include inputs, constraints, activities, outputs, and outcomes must be outlined and examined. Inputs include time, equipment/materials, transportation, staff (nurse practitioner, paramedic), funding, facilities, research, and collaboration with outside parties. Constraints include funding, transportation, local policy and regulation, state regulations, facility, and existing culture. Activities include meetings, media/technology, process development, policy manual/ standard operating procedures development, education, training, collaboration, and stakeholder input and involvement. Outputs include the number of patients serviced, the number of patients diverted from ED transport, and the number of hours of service. The Short-term outcome for this project includes completion of a needs and readiness assessment. Additional short-term outcomes for the future include the creation of a usable and sustainable model, delivery and utilization of this model, and creation of a NPPU in Yuma, AZ. Long term outcomes include decreased ambulance use and reduced ED visits. Impacts include improved and timely access to health care, appropriate resource allocation and utilization, and ultimately improved patient outcomes. The logic model is an ideal framework in this project as it covers numerous components of a needs assessment and readiness assessment to include identification of strengths, weaknesses, threats, resources, and desired outcomes (Zaccanini & White, 2014). The logic model for this project and the development of a nurse-practitioner paramedic unit is depicted in Appendix A.

Framework for Developing a New Model of Care

The Agency for Clinical Innovation (ACI) developed a framework for creating new models of care. According to the ACI, models of care must meet several requirements to include being patient centered, flexible, accessible, innovative, provide integrated care, appropriate resource allocation, promote safe and quality patient care, contain outcome measures and an evaluation process, and create a vision for future services (2013). This framework is composed of five phases (see Appendix B). Phase 1 or project initiation involves identifying an opportunity for change, creating an argument for the change, developing project aims and objectives, generating sponsorship and engagement, developing a working group, and project management (ACI, 2013). The second phase or the diagnostic phase involves defining the problem, identifying the root causes, establishing information and data sources, performing a literature review, finalizing the case for change, and prioritizing issues (ACI, 2013). Phase three or the solution design phase involves a vision for what the service should look like, an overview of the solution design, current and future context, and designing, prioritizing, and testing the solutions, developing an evaluation framework, formally drafting the model of care, obtaining buy in from key stakeholders and sponsors, and creating a plan for disinvestment (ACI, 2013). Phase four or the implementation phase involves defining the change, performing a gap analysis, seeking endorsement, developing a business case, generating sponsorship, building engagement and frontline capacity, developing a communications plan, implementation plan, and reinforcement tactics (ACI, 2013). The final phase, phase five or the sustainability phase involves ongoing monitoring, reviewing the new model of care, evaluation, and knowledge management (ACI, 2013).

Application. Thus far many components present in phase one, project initiation have been identified and discussed. We have identified an issue, built a case for change, and developed project aims and objectives via utilizing a logic model. The involvement of key stakeholders to include early involvement of patients and providers will increase buy in and the likelihood the change will be successful (ACI, 2013). Generating key stakeholder buy in and engagement will be discussed further in the methods portion of this paper. Key stakeholders will be asked if they are willing to be part of a working group for future model development in the key stakeholder survey (Appendix D). Several components of phase two we have also discussed. The problem has been defined and root causes have been identified. We will be discussing data and information sources, a literature review of current evidence based practices later in this paper. Additionally, several components of phase three have also been discussed. A vision for what the service will look like has been developed, current and future contexts, and an evaluation framework has been developed via the use of a logic model. Phase four the implementation phase and phase five the sustainability phase are intended to be completed in future model development. The framework for Developing a New Model of Care was selected as a framework for this project as it encompasses components of a need and readiness assessment and will assist in utilizing this data to create a new model of care, the NPPU in future research.

Concepts

Major concepts used in this DNP project include nurse practitioner, paramedic, access to care, and rural health.

Nurse Practitioner

One key concept is the definition and role of the Nurse Practitioner (NP). The Arizona State Board of Nursing defines a NP as a registered nurse who practices in an advanced role by having acquired advanced education, knowledge, as well as clinical skills to allow them to function as direct health care providers (2009). NPs have the ability to perform assessments, order, conduct, and interpret diagnostic and laboratory tests, and prescribe non-pharmacologic and pharmacologic treatments in order to manage acute and chronic illnesses in a variety of settings (Arizona State Board of Nursing, 2009).

Paramedic

A paramedic can be defined as an individual who has received formal education and training and is equipped to provide prehospital emergency care, transport patients, manage scenes, and perform invasive and pharmacological interventions to manage acute prehospital medical emergencies (Northern Arizona Community Integrated Paramedicine Program, 2014). Given their unique skill set, a partnership between a NP and a paramedic can benefit the community and improve patient care greatly.

Access to Care

Another concept is access to care. Given the numerous changes in health care, health care systems have been charged to deliver higher quality of care despite limited resources (Hall, 2013). Therefore, it is increasingly important that we develop systems to improve patient flow, deliver timely and appropriate treatment, and maximize the utilization of existing resources (Hall, 2013).

Rural Health

Rural health care delivery includes providing access to healthcare and appropriate services, an adequate supply of these services, and ensuring that they are able to be accessed in a timely manner (Rural Health Information Hub, 2016).

Synthesis of Evidence

A synthesis of literature was performed, appraising current evidence and summarizing existing knowledge to inform the development of a NPPU. Several databases were utilized in the literature search to include Pubmed, Cumulative Index of Nursing and Allied Healthy Literature (CINAHL), PsycINFO, and the Embase. Key words included a combination of NP, paramedic unit, paramedic, pre hospital care, advanced practice nurse, ambulance, extended care practitioner, paramedicine, prehospital care, emergency medical services, and nurse. Additional filters included the following inclusion criteria: English language, human subjects, publication within the last five years, and full text articles. A total of 35 results were produced from these searches. Articles were excluded if they did not meet search criteria or were not relevant to the topic of interest. A total of ten articles that applied to this project's purpose were retained (Table 1).

TABLE 1. *Literature.*

Reference	Study Design	Sample and Setting	Methods/Measures	Results	Study Strengths/Limitations
Carter A.J.E. & Chochinov A.H. (2007). *A systematic review of the impact of nurse practitioners on cost, quality of care, satisfaction and wait times in the emergency department.* Canadian Journal of Emergency Medicine 2007; 9(4):286-95	Design: Systematic review	Sample: 36 articles Setting: ED	Data Collection: -systematic review of MEDLINE and CINAHL -searched for articles regarding NPs in the ED -4 key outcome measures: patient satisfaction, quality of care, cost effectiveness, and wait times. Data Analysis: -Quality of Qualitative and correlational studies was assessed by a tool published by Estabrooks and Colleagues. Good quality was defined as a rating of 4 or more. -RCTs were assessed using the Jadad score. Good quality considered a 3 or more. -Articles were excluded if they were of poor quality or did not meet inclusion criteria. -An independent second author extracted data, and reviewed articles for appropriateness.	-Cost effectiveness: NPs were more expensive then residents. -Quality of care: Residents and NPs were found to be equally competent in accuracy of x-ray interpretation, with greater accuracy being associated with more experience. NPs were associated with higher accuracy of physical exam, documentation, and appropriate referrals. -Patient satisfaction: no significant difference found between residents and NPs. -NPs frequently reduce wait times.	Strengths: -Large sample size -High quality review Weaknesses: -Lack of data organization and analysis information. -Most studies compared NPs and residents, not NPs and MDs.

TABLE 1 - *Continued*

Hill, H., McMeekin, P., & Price, C. (2014). A systematic review of the activity and impact of emergency care practioners in the NHS. *Emergency Medicine Journal*, emermed-2013.	Design: Systematic Review	Sample: 21 research articles; 11 quantitative, 9 had quantitative and qualitative elements, 1 was qualitative. Setting: Outpatient setting.	Data Collection: Search of CINAHL, MEDLINE, cohcrane library and EMBASE in 8/12. -PRISMA guidelines used. -Inclusion criteria: research measuring NHS staff and patient perceptions of ECPs, healthcare cost studies, clinical working practices of ECPs. Articles used from adult and pediatric ED, critical care and MIUs, and outpatient settings. No language limitation. -Exclusion criteria: setting was by telephone, focus descriptive, no methodology provided, or evidence outside of United Kingdom. Data Analysis: -Recruitment/sampling, method of collection, data analysis method, key ideas, models, concepts, arguments and assumptions, conclusion, generalizability were extracted to form a structured quality appraisal tool. No additional analysis was performed on quantitative data. -The same method was used for qualitative and mixed method studies with the addition of a key set of conditions that were independently designed. -Differences in appraisal outcomes were resolved in scheduled meetings.	-Patient care and process of care: 10 studies examined ECP provided care and showed a range of benefits. Five studies showed that ECPs had greater patient satisfaction or a better process of care compared to usual providers. -Workplace behavior: 5 studies found that ECPs resolved efficiently resolved communication problems and utilized other healthcare professionals to identify patients that met their skill set. Communication skills, teamwork, and leadership were highly related to ECPs. 3 studies identified that ECPs can improve their decision making process through training, experience, and support. -Patient referrals: results were mixed. -Avoided admissions further along in the patients care pathway: ECPs were effective at avoiding unnecessary admissions. -Cost effectiveness: Mixed results.	Strengths: -Systematic review Weaknesses: -not all articles reviewed were high quality. -limited data analysis -generalizability limited

TABLE 1 - *Continued*

Jennings, N., Clifford, S., Fox, A. R., O'Connell, J., & Gardner, G. (2015). The impact of nurse practitioner services on cost, quality of care, satisfaction and waiting times in the emergency department: A systematic review. *International journal of nursing studies*, *52*(1), 421-435.	Design: A systematic review with a narrative analysis	Sample: 14 articles Setting: emergency department	Date collection: -Systematic review of Medline, CINAHL, EMBASE, and Cochrane for articles between 2007-2009 -duplicate articles removed -articles screened for inclusion and exclusion criteria Data Analysis: -Two reviewers used tools from the Johanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument to assess the quality of studies. -Data was extracted by one of the reviewers, and the other reviewer checked the data. -Discussion was used to resolve disagreement between the two reviewers, and article sent to third review if mediation was required. -Randomization, allocation concealment, validation of study tools, intention to treat, study limitations, and blinding were evaluated in quasi-ransomised trials. -Descriptive studies were evaluated by same approach but in regards to quality and differences in populations, intervention, and outcomes. -Findings from the study were then reviewed by the 2 reviewers and compiled to create a narrative review.	-Cost: Of the 14 articles reviewed, only one discussed cost. Which was insufficient to create a conclusion. -Quality of care: The overall quality of patient care was shown to be higher than usual providers. -Patient satisfaction: Multiple studies showed high rates of patient satisfaction with NPs in emergency care roles. -Wait times: Multiple studies indicated that NPs had positive effects on wait times.	Strengths: -Several high quality studies reviewed. Weaknesses: -Small sample size, generalizability limited -Only 2 reviewers -Lack of detailed data analysis information -Lack of evidence regarding cost effectiveness

TABLE 1 - *Continued*

O'Hara, R., O'Keeffe, C., Mason, S., Coster, J. E., & Hutchinson, A. (2012). Quality and safety of care provided by emergency care practitioners. *Emergency Medicine Journal*, *29*(4), 327-332.	Design: Retrospective case note review	Sample: Random sample of 40 patient encounters from 12 services, 6 employing ECPs, the other 6 not employing ECPs between 6/22/06 and 8/22/07. -Total of 480 noted (240 ECP services, 240 from non-ECP services. Setting: 3 different settings: static centers (ED, walk in clinics, MIU), ambulance/care home, and primary care out of hours services.	Data Collection: -Reviewers rated and assessed for quality and safety utilizing numerical scales to assess five criteria: clinical problem, studies performed, patient management, overall care, and overall quality of care. -14 reviewers provided textual comments in regards to overall patient care. -A pilot of the review form was performed by 3 reviewers. -Each reviewer, reviewed one record from each of the six different services. -Reviewers received one day of training. -Seven reviewers. Data Analysis: -SPSS v.14.17 used to analyze quantitative data. -Reviewer reliability was assessed by intra-rater-consistency. Intra class correlation coefficients were calculated. - A mean quality of care score was calculated by combining the ratings for all 3 aspects of care (assessment, investigation, and management). -To determine consistency between overall ratings of quality of care and mean ratings for combined aspects of care utilizing pearson correlation coefficients. - Textual comments were examined for consistency. -Differences between ECPS and non ECPs and the 3 different settings were examined by descriptive statistics. -Statistical significance was determined by two tailed t tests. -content analysis of textual comments was conducted by 1 researcher.	-Compared to non-ECPs, ECPs scored significantly higher for quality and safety of care provided. -ECPs also scored significantly higher on assessment and quality of clinical record. -ECPs also scored higher on studies and management, though not statistically significant. -Overall, ECPs scored significantly higher across assessment, overall care, and quality of records compared to non-ECPs.	Strengths: -Random sampling. -large sample size -detailed data collection and analysis information Weaknesses: -no mention of blinding. -generalizability limited.

TABLE 1 - *Continued*

O'Keeffe, C., Mason, S., Bradburn, M., & Iheozor-Ejiofor, Z. (2011). A community intervention trial to evaluate emergency care practitioners in the management of children. *Archives of disease in childhood*, *96*(7), 658-663.	Design: Pragmatic quasi-experimental	Sample: n=1153 pediatric patients under the age of 16, presenting with minor conditions. -Intervention n=415 -Control n=748 Setting: Pairs of MIU, urgent care, and GP out of hour.	Data Collection: -Patient management and discharge details were collected. -Information gathered from patient record. -Data obtained: incident location, assessment (chief complaint, studies performed, treatments, disposition, and discharge diagnosis, and time with patient. -Access 2000 was utilized to store data Data Analysis: -Stata v 11 was used for analysis. -90% power at alpha 0.01 -log-transform was utilized for analysis of episode times. -Difference in percentages were calculated for all other outcomes. -Random-effects meta-analysis was used to average the overall affect across the 3 pairs. -Statistical test for heterogeneity for differences between intervention and control for the 3 pairs. -I 2values indicated high percentage of variance as a result of differences between the pairs. -Further analyses were performed as the design was non-randomized to analyze if results were true or caused by sources other than the intervention. -Data re-analysed using analysis of covariance and logistic regression adjusting for chief complaint, setting, age, and gender. -unadjusted odds ratio was calculated and compared to odds ratio for each outcome and service.	-Discharge: ECPs discharged significantly less children than non-ECPs. -Referral: ECPs referred significantly more patient in the MIU pair to the hospital. ECPs made more non-urgent referrals in GP out of hours and urgent care services. -Time: The total time was significantly less for children seen by ECPS in out of hours and urgent care settings. -Investigations: ECPs in the MIU pair performed significantly less investigations than usual providers. -Treatment: Treatments delivered were fewer across ECP pairs. In urgent care pair, ECPs provided significantly fewer treatments than usual providers.	Strengths: -Large sample size Weaknesses: -Non-randomized -Generalizability limited -no patient follow-up

TABLE 1 - *Continued*

O'Keeffe, C., Mason, S., & Knowles, E. (2014). Patient experiences of an extended role in healthcare: comparing emergency care practitioners (ECPs) with usual providers in different emergency and urgent care settings. *Emergency medicine journal: EMJ*, *31*(8), 673-674.	Design: Qualitative survey of a pragmatic quasi-experimental study	Sample: n=1960 Setting: Outpatient setting	Data Collection: 5 setting pairs to include ambulance, urgent care GP out-of-hours, minor injury unit, and care home. For each five there was one pair intervention group receiving care from an emergency care practitioner (ECP) and the other pair, the control group receiving usual care. -Approximately 7 days after care was received a questionnaire was sent to the patient. -Questionnaire was aimed at measuring patient satisfaction and experience with care. -A 5-point Likert scale was used for responses. Data Analysis: -Responses were dichotomized into highly satisfied or other on satisfaction scale for analysis. -ECP and usual care providers in each pair and their percentage differences were calculated for outcomes corresponding to 99% confidence intervals.	-Respondents reporting to be highly satisfied with care was greater for ECPs than usual providers and was statistically significant in ambulance (16.6%), GP out of hours (22.6%), and care home (51%) pairs. -Ambulance: ECP n=223, highly satisfied=188 (84.3%). Control n=167, highly satisfied =113 (67.7%). -GP out of hours: ECP n=250, highly satisfied 189 (78.8%). Control n=278, highly satisfied 147 (56.1%). -Urgent care: ECP n=187, highly satisfied 142 (75.9%). Control n=337, highly satisfied 230 (68.2%). -Care home: ECP n=62, highly satisfied 57 (91.9%). Control n=22, highly satisfied 9 (40.9%). -Minor injury unit: ECP n=92, highly satisfied 79 (85.9%). Control n=305, highly satisfied 231 (75.7%). -Results did not change after adjusting for age, sex, or chief complaint.	Strengths: -large sample size Weaknesses: -limited information on data analysis -lacks generalizability

TABLE 1 - *Continued*

Mason, S., O'Keeffe, C., Knowles, E., Bradburn, M., Campbell, M., Coleman, P., ... & Patterson, M. (2012). A pragmatic quasi-experimental multi-site community intervention trial evaluating the impact of Emergency Care Practitioners in different UK health settings on patient pathways (NEECaP Trial). *Emergency Medicine Journal*, *29*(1), 47-53.	Design: pragmatic quasi-experimental	Sample: n=5525. -2363 intervention group -3162 control group -Each of the 5 pairs of control and intervention group was roughly n=600. Setting: 5 settings to include ambulance services, general practitioner out of hours services, urgent care, care homes, and minor injury units (MIU).	Data collection: 5 pairs, one pair intervention group receiving care from an emergency care practitioner (ECP) and the other pair, the control group receiving usual care. Informed consent obtained at onset of visit. Data collected by staff at each site then sent to researchers. Details included in the data were mode of transportation, incident location, chief complaint, studies performed, treatments delivered, disposition, and discharge diagnosis. Data Analysis: -Each group was close to n=600 to create a 90% power at alpha=0.01. Type 1 error of 0.01 allowed for the 5 outcomes to remain at a 5% significance level. -Data was stored in Access 2000. -Data was analysed via SPSS 14.0 and STATA 9.0 -Treatment effect for each pair was calculated. -Log transform was applied to data for analysis of time of episode. -Random-effects meta-analysis was utilized to analyze overall effect and average of 5 pairs. -A heterogeneity test was performed to analyze the difference between intervention and control groups and ensure consistency across the 5 pairs.	-Overall, 57% of patients were discharged (n=3165), 24.4% were referred to the hospital urgently (n=1347), and 14.3% were non-urgently referred (n=789). -Discharges: The ECP or intervention group discharged significantly more patients during ambulance and care home services than the control. Non-ECP staff, control pair discharged significantly more patients in urgent care and GP our-of-hours care. MIU pairs were similar in amount of discharges. -Referrals: The control pair or non ECPs referred significantly more patient urgently in ambulance and care home services compared to ECP pair. In MIU service, ECPs referred significantly more patients urgently than non ECP staff, however control staff made significantly more non-urgent referrals. In ambulance, GP out-of-hours, urgent care, and care home more nonurgent referrals were made by ECPs. -Studies: Overall, investigation studies were only done on 13.5% of patients (N=795). In ambulance and GP out-of-hours pairs, ECPs had higher percentages of patients undergoing at least one study compared to control. In the MIU and urgent care pairs, non ECP/control had significantly higher rates of studies compared to ECPs. No significant difference between care home pairs. -Treatment: Overall, 43.6% of patients received a treatment, most commonly	Strengths: -large sample size -informed consent obtained. Weaknesses: -No randomization -limited data on data collection and analysis presented. -Lack of generalizability -No patient follow-up

				prescription (n=2408). In ambulance and care home pairs, ECPs had significantly higher rates of treatment. In urgent care pairs, the control staff gave statistically higher rates of treatment. -Time: time spent with patient was longer in for intervention group in ambulance and care home pair. For GP out-of-hours, urgent care, and MIU total time spent with patient was longer for control staff/non-ECP.	

TABLE 1 - *Continued*

Naylor, M. D., & Kurtzman, E. T. (2010). The role of nurse practitioners in reinventing primary care. *Health affairs*, *29*(5), 893-899.	Design: Structured evidence synthesis	Sample: 26 articles Setting:N/A	Data Collection: -Search performed utilizing online databases: Pubmed/MEDLINE since 2000, and updated systematic reviews through 2002. -Specific inclusion and exclusion criteria -nursing researchers, leaders of nursing organizations and key health contacts were involved to further refine studies. Data Analysis: no data analysis mentioned	-NPs were found to have equivalent to better patient outcomes. -NPs were found to have greater patient satisfaction, longer consultation times, improved patient follow-up, and greater screening, assessment, and counseling provision. -few studies were found evaluating the cost effectiveness of NPs.	Strengths: -Did include review of several high quality systematic reviews. Weaknesses: -Limited data collection information -No data analysis information -Published in 2010, contained studies from 2000 on. -Small sample size, lack generalizability.
Stanik-Hutt, J., Newhouse, R. P., White, K. M., Johantgen, M., Bass, E. B., Zangaro, G., ... & Weiner, J. P. (2013). The quality and effectiveness of care provided by nurse practitioners. *The Journal for Nurse Practitioners*, *9*(8), 492-500.	Design: systematic review	Sample: 37 articles Setting: N/A	Data Collection: -Aim: compare NPs and MDs health outcomes. -Systematic review of articles utilizing search databases: proquest, Cochrane, pubmed, and CINAHL. -inclusion and exclusion criteria -Trialstat used to organize and store articles -2 independent reviewers applied inclusion and exclusion criteria to articles to determine relevance -Differences in opinion were resolved by consensus Data Analysis: -2 step process used to assess for quantity, consistency, and strength of articles. -Articles were initially graded as high, moderate, low, or very low. -Articles were graded a second time utilizing an adapted GRADE working group criteria to include number, design, quality of study, and consistency.	- 11 outcomes reviewed: patient satisfaction, self-reported health status, functionality, number of ED visits, number of hospitalizations, duration of ventilation, hospital length of stay, blood pressure, blood glucose, and serum lipid levels. -When compared to MDs, NPs had comparable or better ratings in the 11 outcomes. -Evidence reveals improved serum lipid levels in patients seen by primary care NPs compared to MDs. -Only safety outcome reviewed was mortality. No difference in mortality rates was found between MDs and NPs.	Strengths: -systematic review -several high quality articles -moderate sample size -independent reviewers Weaknesses: -Lack of data analysis description

TABLE 1 - *Continued*

Swain, A. H., Al-Salami, M., Hoyle, S. R., & Larsen, P. D. (2012). Patient satisfaction and outcome using emergency care practitioners in New Zealand. *Emergency Medicine Australasia, 24*(2), 175-180.	Design: Qualitative, satisfaction survey	Sample: 100 patients, aged 14 and older Setting: Outpatient setting, Kapiti District, New Zealand	Data Collection: Patient satisfaction surveys obtained between 11/8/2010-12/13/2010. Patients were randomized by blind selection via pool of numbers. 50 patients were attended by extended care paramedics (ECP) and the other 50 by standard emergency ambulance service paramedics (EAS). Phoned to consent for survey 3-10 days after visit by paramedic. Survey obtained by independent surveyor. Data Analysis: Survey answers were recorded in Excel database. Analyzed via PASW 18.0. Discrete variables were compared using x squared test. Continual variables compared via unaired t-test. P=0.05.	Patients treated by both ECP and EAS reported high levels of satisfaction. Patients expressed a clear preference to being treated at home. 11 of the 50 ECP patients were transferred directly to the ED, and one directly to a general practitioner. Only 8 out of the 50 EAS patients were treated at home.	Strengths: -Detailed data collection and analysis -randomization Weaknesses: -Lacks generalizability, small sample size.

Gap in Knowledge

This synthesis revealed a dearth of available research and theoretical articles regarding nurse practitioner-paramedic units. While disappointing, this is an expected finding as many NPPUs are still in pilot stages of development. To date there is a plethora of research and literature supporting a similar model of care, that of the extended care practitioner (ECP). Therefore, this literature synthesis will focus on the available evidence regarding extended care practitioners as well as the impact of NPs.

Strengths

Seven studies suggested that ECPs are as effective, if not more effective than usual care providers in several areas of care (Appendix A). An ECP is a term commonly used in the United Kingdom and Australia and refers to a paramedic or nurse who has completed advanced training in order to act as an autonomous practitioner in prehospital, primary, and acute care settings (Mason et al., 2012). ECPs were found to discharge (rather than transfer or refer) significantly greater amounts of patients, especially in mobile settings, to include ambulance and care homes (Mason et al., 2012; Hill, McMeekin, & Price, 2014). Decreased rates of unnecessary admissions were associated with ECPs compared to usual practitioners or those with traditional roles such as physicians (Hill et al., 2014). Workplace performance was deemed to be as good as usual care providers (Hill et al., 2014). ECPs were also associated with significantly higher quality and safety of care, assessments, quality of clinical patient records, and overall care compared to their non-ECP counterparts (Hill et al., 2014; O'Hare, O'Keefe, Mason, Coster, & Hutchinson, 2012; O'Keefe, Mason, & Knowles, 2014).

One study compared standard emergency ambulance service (EAS) with ECPs and found that while both received high levels of satisfaction, the majority of patients expressed a desire to be treated at home (Swain, Al-Salami, Hoyle, & Larson, 2012). Of the 50 ECP patients only 11 were transported to the ED, compared to the 42 out of 50 EAS patients that were transported to the ED (Swain et al., 2012). A single survey of 1,960 patients in five different settings treated by either an ECP or a usual provider revealed that ECPs received significantly higher rates of satisfaction in ambulance, GP out of hours (urgent care), and care home settings (O'Keefe et al, 2014).

Only one study examined the effect of ECPs on pediatric patients and found that ECPs were found to discharge significantly fewer children and deliver fewer treatments (O'Keefe, Mason, Bradburn, & Iheozor-Ejiofor, 2011). In minor injury clinics, ECPs were found to perform fewer diagnostic tests and refer more patients to the hospital.

Weaknesses

Many of the studies reviewed shared the same authors which raises the question of diversified literature and findings. Only one article addressed cost effectiveness, and reported that ECPs were cost effective, however, results were mixed (Hill et al., 2014). Results on ECPs and patient referrals were mixed between studies. Additionally, only one study examined ECPs impact on the pediatric population and results indicated that ECPs were not as effective at managing pediatric care compared to usual providers (O'Keefe et al., 2014). Therefore, there is a lack of evidence regarding ECPs impact on referrals, cost effectiveness, and pediatric care indicating that more research is necessary.

Impact of Nurse Practitioners

Strengths

The impact of NPs on patient care has been studied by several researchers. A systematic review of 14 articles revealed that nurse practitioners working in the ED had high rates of patient satisfaction, positive effects on ED wait times, and delivered a higher quality of care than usual providers (Jennings, Clifford, Fox, O'Connel, & Gardner, 2015). A literature review echoed these findings, reporting that NPs in primary care were associated with greater patient satisfaction, longer consultation times, increased patient follow-up, and improved screening, assessment, and counseling delivery (Naylor & Kurtzman, 2010). Another study found that NPs and medical doctors were comparable in patient satisfaction, functional status, self-reported health status, number of ED visits, number of hospitalizations, duration of ventilation, length of hospital stay, blood pressure, blood glucose, and serum lipid levels (Stanik-Hutt et al., 2013). Additionally, a systematic review of 36 articles found that NPs were associated with higher accuracy of physical exams, documentation, and appropriate referrals compared to residents (Carter & Chochinov, 2007). The review also found that NPs were associated with decreased wait times (Carter & Chochinov, 2007).

Weaknesses

While articles attempted to examine the cost-effectiveness of NPs, results were insufficient or inconclusive (Jennings et al., 2015; Naylor & Kurtman, 2010). No safety outcomes were examined by any of the studies. The studies by Carter and Chochinov (2007) and Naylor & Kurtzman (2010) are dated, indicating the need for additional research.

As this evidence synthesis has indicated, to date there is evidence supporting the effectiveness of ECPs and NPs. ECPs and NPs have demonstrated a positive impact on patient outcomes. With their advanced education, skills, and ability to practice in diverse settings, the addition of an NP to a prehospital setting such as a NPPU would be highly beneficial.

METHODS

Design

This DNP project design was a needs and readiness assessment regarding an NPPU. A needs assessment involves a comprehensive understanding of a community's resource gaps, needs, strengths, and assets (Minnesota Department of Health Services, 2011). Identifying problems, business opportunities, new mandates, and upcoming changes or regulations are also important components of the needs assessment (Zaccagnini & White, 2014). The ultimate purpose of a needs assessment is to collect information to inform and develop a plan for the project to increase its success (Zaccagnini & White, 2014). Several components of the needs assessment include resources, desired outcomes, and potential strengths, weaknesses, opportunities, and threats (Zaccagnini & White, 2014). A needs assessment also involves identification of the population, key stakeholders, organizational assessment, and team formation (Zaccagnini & White, 2014). These components will be discussed further in this section.

A readiness assessment essentially collects information regarding the readiness of the community and its members (MDHS, 2011). Components of a readiness assessment involve assessing the communities' ability to implement programs and other changes, community recognition of the problem, availability of resources, and the position of leaders regarding the issue (MDHS, 2011).

Needs and readiness assessments are complimentary and should be conducted together prior to any program implementation to improve the success of any intervention. For these reasons a needs and readiness assessment design was selected for this project.

Ethical Considerations

The ethical principles, respect for persons, beneficence, and justice were addressed in this project.

Respect for Persons

All participants have the option of voluntarily participating in the survey. In order to maintain respect of persons, individuals must not only volunteer to be a part of the research but must also be adequately informed (USDHHS, 1979). A disclosure statement was provided to all participants who may participate in the surveys regarding the need for a NPPU (Appendix C).

Beneficence

Benefits and risks of this project need to be clearly identified. There are numerous benefits to having a NPPU in Yuma as discussed in prior sections of this paper. No potential risks have been identified.

Justice

Justice entails that each person receives equal benefit and what is deserved to them (USDHHS, 1979). This project addresses the overuse and inappropriate use of EMS and ED services, ED overcrowding, and appropriate resource allocation. Surveys obtained from key stakeholders will allow for input from multiple individuals regarding resources needed to develop a NPPU model for Yuma, AZ.

Setting and Participants

Participants for the key stakeholder survey included the Chief Operating Officer/Chairman of Southwest Emergency Physicians (SWEP) group, the EMS medical director/ ED physician, the EMS Division Chief of YFD, the Fire Chief of YFD, YRMC EMS coordinator, YFD paramedics, the Chief Nursing Officer/vice president of Patient Care Services, and primary care physicians, nurse practitioners, and physician assistants who are members of the Allied Health Providers of Yuma (AHPY) group which is composed of 65 members The setting of this survey is described earlier in this paper in the local problem portion.

Data Collection

Surveys are an optimum way to obtain data through self-report as they are flexible, have a broad scope, applicable to numerous populations, can focus on a wide range of topics, and they may be utilized for many purposes (Polit & Beck, 2012). Additionally, surveys are a primary tool used to perform a needs assessment (Zaccanini & White, 2014). Key stakeholders were invited to complete a survey of 9 open ended questions developed by the principal investigator (PI) (see Appendix D). The DNP project committee assessed content validity. Face validity was assessed by a key stakeholder who was not participating in the study. This stakeholder examined and deemed that the surveys were relevant and covered the concepts the survey sought to measure. Survey data was collected utilizing Qualtrics (n.d.). Qualtrics is a research software that allows participants to complete surveys and stores their responses. A link to the survey was emailed by the PI to key stakeholders along with a disclosure statement. The disclosure statement served to inform participants that their responses would be utilized for research (Appendix C). Surveys were sent out via email by the PI on September 11, 2016. Surveys were open for one month. A

reminder email was sent out at the two week mark on September 26, 2016. Data collection ended on October 10, 2016. The AHPY representative, Dr. Luz Wiley forwarded the PI's initial email and two-week reminder email to AHPY members. Consents were obtained from YFD, SWEP, and AHPY representatives to distribute surveys to individuals that were either employed by or were professional members of these entities (Appendix G, H, & I).

Data Analysis

All survey responses were reviewed utilizing Qualtrics. Surveys responses were consolidated by question responses. Responses then were analyzed for themes and categorized accordingly.

RESULTS

Survey Data

The survey was distributed to 86 individuals. A total of 17 surveys were completed for a response rate of 20%. Qualitative (thematic) analysis of the survey focused on the nine questions. Survey responses varied from several word answers to longer, more detailed responses. For comprehensive narrative responses see Table 2.

Need for an NPPU Unit

Three categories emerged from question number one, "Do you feel that a nurse practitioner-paramedic unit is needed in Yuma, AZ? Why or why not?" These categories included yes, maybe, and no. Ultimately, 82% (n=14) of respondents indicated that an NPPU was needed and identified the NPPU as being beneficial to the community, improved resource allocation, decreased burden on the areas emergency room and hospital, and/or associated with decreased costs.

Individuals who responded that a NPPU may be needed stated that there may be other ways to address the communities needs or that there was not enough known about what needs the community had. This group comprised 17% (n=3) of respondents. Only one of the seventeen survey participants stated that they did not think a NPPU was needed.

TABLE 2. *Narrative Result Responses*.

Question	Theme	Sub Theme	Response
Question 1: "Do you feel that a nurse practitioner-paramedic unit is needed in Yuma, AZ? Why or why not?"	Yes, needed		-I believe a nurse practitioner-paramedic unit is needed in Yuma. This unit can help with treating patients that do not need transportation to YRMC. By doing this we can cut down on a number of things. It can help cut down costs for patients by not being transported and having an ambulance bill and a hospital bill. It will also cut down on patients at the hospital. With this less patients at YRMC can help with the long waits at YRMC. - I do believe that a nurse practitioner-paramedic unit is needed in the Yuma, Arizona because the EMS community run calls on patient's who do not need emergency care. I personally have ran some calls where a patient is out of their prescribed medication and need more. I have also ran calls where patient's need other services like sutures or psychological help at the facilities here locally.
	Maybe		-Maybe. There is currently a NP unit that works out of the hospital that seems to be meeting some of the needs of the community. An assessment of other needs that are not being met should be done to better understand how a unit of this type would be beneficial.
	No		- I do not believe and RNPA/Paramedic unit is required for the city of Yuma. I have worked along RN/medic general transport ambulance transport units in the past. In large metropolitan areas there is need due to the number of critical patients requiring specialty care and the availability of specialty care. I believe Yuma primarily outsources it specialty/critical care to other cities.

TABLE 2. – *Continued.*

Question 2: "What benefits do you see as a result of this program? Do you see any negatives to this program?"	Benefits	Decreased emergency department visits	-Benefits are obviously decreasing traffic to the only hospital here in Yuma. Patients could be treated and released for their non emergent illness/ injuries, therefore decreasing visits and wait times in the ED. -Benefits likely would reduce ER visits and potentially hospitalization. -It would be beneficial by keeping the patient out of an already over crowded and understaffed ER.
		Decreased unnecessary EMS calls and transports	-It would allow ambulances to run true emergency calls. -Foremost, I foresee the benefit of lessening the burden on EMS entities and the emergency department to respond to an increased call volume and patient count that does not entirely require ED capabilities. -With this program I see that it could reduce the call volume on repeat customers who don't need emergency medical care creating better customer service for the public. -A decrease in 911 transports to the emergency department and getting the proper care at the appropriate level.
	Negatives	Cost	-I believe no negatives arise with this type of program other than cost. - I think the main negative to this would be cost. Specialized equipment and staffing would be expensive and there would need to be a system in place to make it profitable.

TABLE 2. – *Continued.*

Question 3: "What resources do you think will be necessary for the success of a nurse practitioner-paramedic unit in Yuma, AZ?"	Buy in and coordinated efforts between the hospital, COY fire department, and other entities.		-I believe that the biggest necessary resource is hospital and physician buy-in as well as a change in culture amongst EMS entities. The consistent focus of prehospital emergency care entities has largely remained myopic and singularly focused on the transport of patients to the emergency department. This must change. -There has to be equal collaboration from all parties involved. - I believe the resources needed to be successful will be full by in by the Hospital and local Fire Departments. -A very coordinated effort between the Hospital and ambulance providers.
	Equipment and outfitted vehicle		-Equipment would be necessary for procedures that the NP could do, such as POCT, suture material, otoscope, EMR for prescribing, etc. -A vehicle would also be necessary along with all of the medical equipment needed. -A vehicle that carries equipment that can be used by personnel to accomplish their scope of practice.
	Funding		-Personnel will be the biggest expense. With the current call volume in Yuma there would have to be a unit created for this purpose, it would be difficult to sustain a… program with current staffing. -Funding Obviously. Vehicles and technology already exists here in the city of Yuma. I believe we would need at least 3 NPs for scheduling and time off. -Well, the NP will need to be paid by someone, and will plausibly need a resource if he/she is unable to manage the patient alone.

TABLE 2. – *Continued.*

Question 4: "What situations do you think would be appropriate for care delivery by a nurse practitioner-paramedic unit?",	Low acuity calls		-Wound care, sutures, UTI's, origins fevers that could be diagnosed on the rig such as otitis media, other minor complaints or no complaint at all, only that the patients needs his/her BP pills refilled and is from out of town. - Low acuity type calls, laceration repair, and prescription refills. -When patients want to be seen for a common cold, small wound care. - Care for those patients that do not need an emergency room. - Prescription medication refill type calls, simple procedures like catheters, foleys, and sutures.
	Transitional care and chronic illness care		-Re-evaluation of patients that have been discharged from the hospital or evaluating disabled patients that may have difficulty ambulating or leaving their homes. - Chronic conditions without an acute exacerbation. -New onset patients of CHF, A-Fib, Newly implanted Pacemakers, Behavioral, Chronic respiratory patients. -The following situations would be appropriate for care by the unit. Patients that need education for their treatment plans they have gotten from YRMC or PCP. Pts that are not taking their medications appropriately that they received from doctors. -Patients that need monitoring such as CHF and respiratory disease that do not have a home health nurse yet. -Post discharge patients that have little to no support at home. Follow up on patients that are at a high risk to need readmission.
	Behavioral health		-A patient with mental illness issues….alcohol and drug abuse cases that need a re-hab type facility. -Mental health patients that use the 911 system and emergency room inappropriately. - Psychiatric type calls.

TABLE 2. – *Continued.*

Question 5: “What protocols do you feel would be necessary to the success of a nurse practitioner-paramedic unit in Yuma, AZ?”	Need for specific protocols		-There would need to be protocols instituted on what exactly the NP should/can treat with a flow chart and maybe a "needs to go to the ER" if the NP cannot treat the complaint. -Protocols that allow for emergency treatments if the need arises. -Protocols that limit a timely response to down grading a call.
	Medical director		-Depending on the service that would be provided there would be a need for many protocols. Fire Department paramedics work under the YRMC Medical Director's license and his buy in on the program would be necessary. - Medical director will need to be involved to help create protocols such as when to delineate care to the NP.
Question 6: “What agencies do you think would need to be involved in order to make this model of care successful? Would you be willing to contract with them?”	No theme, numerous agencies listed.		
	Willingness to contract		-Yes, I am willing to collaborate with other agencies. -Yes, a contract would have to be in in place before the program could begin. - Contracts are already in place with most agencies, we would need to adjust them to fit the new needs.
	Unwilling to contract		- I would not be willing to contract with them due to similar proposals already being shot down.

TABLE 2. – *Continued.*

Question 7: "Do you think this service would increase patient satisfaction and improve patient outcomes? Why, or why not?"	Patient satisfaction		-Satisfaction, yes because patients feel that they are receiving care immediately and not having to wait for 2-10 hours at the ER, plus they can be in the comfort of their own home. - I do. Patient's would receive the appropriate level and degree of care at a reduced cost. This parlays into an increased willingness to seek healthcare out sooner as opposed to waiting until a situation has deteriorated greatly. I believe the theoretical application of appropriate care at a more appropriate cost will increase patient satisfaction and lessen the stress associated with large hospital bills. -I think it would. I think that it would increase satisfaction because it would help bridge the gap for some families that do not have a primary care physician, it would decrease the customer's out of pocket cost by not having to go to the hospital. -Yes I would. Seeing a provider at their home would increase satisfaction I believe. A NP treating a sick child, for instance, would allow the family and child to stay home and receive treatment without having to go to the ED and wait for hours.
	Patient outcomes	Improved patient outcomes	-I believe it would increase patient satisfaction and patient outcomes. - Increase satisfaction, provides them a service that prevents them from a 6-8 hour ER wait, and they may be more likely to get care than later, preventing the exacerbation of their illness. -My belief is that it would increase patient satisfaction and outcomes if it targeted gaps in current service and met the needs that are not being met. -In regards to EMS I believe if a RNPA could come to low priority calls and prescribe medications and care within their scope this would improve patient outcomes and reduce stress on YRMC.
		No improved patient outcomes	-Outcome, probably not unless a patient died because of something they contracted by going the hospital, but who would be able to determine that if they never went in the first place.

TABLE 2. – *Continued.*

Question 8: "Would you support this type of program being implemented in Yuma, Arizona? Why or why not?"	Support		-Yes, this program is long overdue in Yuma. We have an influx of geriatric patients, and we also have our frequent callers that use emergency services as their quick and easy fix to their issues. There are other alternatives than just emergency services. -I would absolutely support such a program for many of the above reasons. Being able to streamline healthcare and lessen costs, all while decreasing the increasing burden on emergency healthcare providers, offers an adequate justification for this program's implementation in Yuma, Arizona. - I would support this type of program. This program will be beneficial to not only our departments and hospital but most of all our patients.
Question 9: "Would you be interested in being a part of a working group for the future development of this type of model of care?"	Yes		-I would love to be part of a working group for the future development of this type of model of care.

NPPU Perceived Benefits and Negatives

Two main themes emerged from question number two, “What benefits do you see as a result of this program? Do you see any negatives to this program?” These themes were benefits and negatives. In addition, several sub themes were identified.

Numerous benefits to a NPPU program were identified by respondents. One of the subthemes identified was that of decreasing emergency department visits which was identified by 53% (n=9) of respondents. A second sub theme identified by 41% (n=7) of respondents was decreasing unnecessary EMS calls and transports. A third sub theme identified by 29% (n=5) of respondents was that of decreased costs associated with the use of an NPPU unit. Cost savings was related to patient cost savings, hospital savings, decreased healthcare expenditures, and decreased community costs.

Several additional benefits of an NPPU were identified to include an excellent educational opportunity, bridging the gap for patients who do not have a primary care provider, improved access to care, benefit those who have difficulty leaving the home, and keeping sick patients out of an environment where they may become sicker or spread their illness.

Negatives to an NPPU were identified by respondents. One sub theme identified by 29% (n=5) of respondents was cost. Other negatives to an NPPU identified included the potential for the NPPU to be used inappropriately or abused by citizens and even EMS personnel and increased liability for the nurse practitioner and paramedic as they would be making decisions regarding diverting the patient from emergency services.

Resources

Several themes emerged from survey question number three, “What resources do you think will be necessary for the success of a nurse practitioner-paramedic unit in Yuma, AZ?” Thirty-five percent (n=6) of respondents included buy in and coordinated efforts between the hospital, COY fire department, and other entities.

A second theme regarding necessary resources was equipment and an outfitted vehicle, which was identified by 41% (n=7) of respondents. Funding was identified as another required resource, to include funding of personnel by 18% (n=3) of respondents. Several other resources were identified by respondents to include physician trust of prehospital care providers, scheduling, education (specifically for dispatchers and paramedics), and access to patient history, charts, and EMS transport field databases.

Situations for Care Delivery

Question four, “What situations do you think would be appropriate for care delivery by a nurse practitioner-paramedic unit?”, presented numerous ideas regarding situations in which an NPPU unit may be utilized. Low acuity calls was one theme identified as situations that would be appropriate for NPPU care delivery by 47% (n=8) of respondents. As indicated by responses, low acuity calls had a variety of definitions.

Transitional care and chronic illness were identified as appropriate care situations for an NPPU by 35% (n=6) of respondents. Behavioral health and psychiatric type calls were identified as appropriate care situations by 29% (n=5) of respondents. Additional situations that some respondents felt may be appropriate for an NPPU to respond to included complex trauma and

rapid sequence intubation emergency medical calls, failure to thrive patients, hospice patients, and patients who are unable to self-transport to a health care provider.

Necessary Protocols

Question five asked "What protocols do you feel would be necessary to the success of a nurse practitioner-paramedic unit in Yuma, AZ?" Two major themes presented from the responses to this question. The major theme was the acknowledgement of a need for specific protocols for an NPPU which was identified by 65% (n=11) of respondents. A second theme was the need for a medical director to be involved in not only protocols but the program as well, which was stated by 24% (n=4) of respondents. An additional 18% (n=3) of respondents were unsure about what protocols would be needed.

Agencies

Question six asked, "What agencies do you think would need to be involved in order to make this model of care successful? Would you be willing to contract with them?" There were numerous agencies listed by each respondent, therefore no specific themes were noted. Agencies that were identified as important to have involved with the NPPU included YRMC, local fire departments, public health department/ Department of Health Services, Regional Center for Border Health, ED physicians, rehabilitation facilities, urgent cares, insurance providers, local primary care providers, specialty care providers, home health agencies, pharmacies, and local mental health agencies such as Horizon and Mountain Health and Wellness. A total of 29% (n=5) of respondents stated they would be willing to contract with other agencies.

Patient Satisfaction and Outcomes

Two themes were identified for question number seven, “Do you think this service would increase patient satisfaction and improve patient outcomes? Why, or why not?” The primary theme was improved patient satisfaction. Ninety-four percent (n=16) of respondents stated that they felt an NPPU would improve patient satisfaction. Respondents felt that an NPPU would increase patient satisfaction by receiving immediate ad appropriate care, not having to wait in the ED, being treated in their home, decreased cost of care, and bridge gaps in care.

The second theme was patient outcomes. Fewer respondents addressed the NPPUs effect on patient outcomes. Twenty-four percent (n=4) of respondents stated that an NPPU would improve patient outcomes. Only one of the seventeen respondents stated that they did not think an NPP would improve patient outcomes.

Support

Question eight asked “Would you support this type of program being implemented in Yuma, Arizona? Why or why not?” Ultimately, 94% (n=16) of respondents stated that they would support an NPPU program in Yuma.

Working Group

The final question was, “Would you be interested in being a part of a working group for the future development of this type of model of care?” A total of 94% (n=16) of respondents were interested in being part of a working group.

DISCUSSION

The data obtained in this DNP project supports an NPPU in Yuma, Arizona. The survey responses from key informants not only provided a knowledge base for resources, but for other

necessary components of the program to include contracting agencies, protocols, and appropriate care situations. Additionally, multiple potential benefits were identified to include reduced ED visits and hospital use, increasing EMS availability for emergency calls, decreased healthcare costs, appropriate allocation of care, bridging gaps in care, improved access to care, and provides excellent educational opportunities. In contrast, respondents cited negative aspects of an NPPU to include the potential cost of the program, liability for the NP, and potential for abuse of the service.

Respondents associated an NPPU with increased patient satisfaction and the potential to improve patient outcomes. Overall, respondents expressed support for the implementation of this type of model of care in the City of Yuma with the majority of respondents expressing interest in being a part of a working group for the future development of this innovative model of care.

Strengths and Limitations

A major limitation in this DNP project was participant recruitment. Despite the survey being disseminated to 86 individuals, the final sample size of 17 was small. While I did have control of who received surveys, with the exception of surveys distributed by the AHPY representative, there was no control over who viewed, opened the survey link, and participated in the survey, which may have affected the response rate. Efforts were made to increase response rates, such as sending out a two-week reminder email. As a result of the small sample size, the findings of this DNP project may not be representative of all stakeholders.

An additional potential limiting factor was anonymity. While responses were anonymous to protect respondents and encourage participation, this resulted in no demographic data to include job title which may have enriched the survey results.

While online surveys present numerous benefits, they may also result in participant bias. This type of bias may occur when individuals feel comfortable utilizing technology such as the internet or computers when compared to other individuals in the population (Dykema, Jones, Piche, & Stevenson, 2013).

Finally, the content studied and included in this DNP project to include that of the NPPU itself may be considered a limitation. Concepts such as transitional care, community paramedicine, and especially the NPPU are relatively new and data is limited.

In spite of several challenges and difficulties, there were numerous strengths in this DNP project. This survey delivery platform was effective and there were no issues reported regarding link failure or distribution.

Despite the small sample size, survey responses were comprehensive, rich, and addressed each one of the study questions: “Is a nurse practitioner-paramedic unit needed in Yuma, Arizona?”, and “What resources will be required to create a feasible model for a nurse practitioner-paramedic unit specific to Yuma, Arizona?” To date no evidence-based studies have been identified addressing needs or resources required to initiate an NPPU unit within a community, let alone a unique rural community such as Yuma, Arizona. The data collected and analyzed for this DNP project not only highlights healthcare issues NPPUs can address, but also presents foundational data as to the need for, benefits, negatives, resources required, appropriate care situations, collaborative agencies, impact on patient satisfaction and outcomes, local support, and working group availability in regards to a NPPU for Yuma, Arizona.

Relation to Other Evidence

As mentioned in the synthesis of evidence portion of this paper, there is a dearth of evidence or scholarly articles regarding NPPUs. Findings from this project are therefore compared with more recognized programs to include community paramedicine and transitional care programs.

Benefits and Negatives

Perceived benefits and negatives from survey responses were compared to published studies regarding the benefits and negatives of community paramedicine and transitional care programs. Reported benefits were similar to existing research. Decreased emergency department visits were a consistent finding in other studies (Bigham, Kennedy, Drennan, & Morrison, 2013; Thompson Media Group, 2014; Choi et al., 2016). For example one community paramedicine pilot program treated 300 patients in 2013 and only needed to transport 20-25% of patients for further care to the ED (Thompson Media Group, 2014). This equated to an average savings of 14 hours of ED bed time (Choi et al., 2016).

There is no research to date regarding the cost savings of a NPPU. There is some evidence at present that shows that community paramedicine programs are cost effective options for care delivery (Bigham et al., 2013; Choi et al., 2016). One community paramedicine program focused on congestive heart failure patients, had a readmission rate of 16.3% compared to the national average of 23%, equating to a 7,620 dollar cost savings per patient from October 2013 to February 2015 (Choi et al., 2016). Additionally, several studies have shown cost savings associated with transitional care programs (Naylor, Aiken, Kurtzman, Olds, & Hirschman, 2011; Morrison, Palumbo, & Rambur, 2016). It is estimated that the average cost savings per Medicare

beneficiary was 3,000 dollars at six months and 5,000 dollars at 12 months involvement in a transitional care program (Naylor et al., 2011). However, no data was found to compare the cost of the program with the potential savings.

Patient Satisfaction

The majority of respondents felt that an NPPU would be associated with high rates of patient satisfaction which is comparable to results found in similar studies. One systematic review of paramedicine programs showed high levels of patient satisfaction (Bigham et al., 2013). One paramedicine program had an average patient satisfaction rating of 4.5 out of 5 (Choi et al., 2016). Therefore, while these studies are similar and may reflect patient satisfaction with an NPPU they may not accurately depict patient satisfaction in this different model of care.

A lack of comparative data was found regarding necessary resources, required protocols, impact on patient outcomes, situations for appropriate care delivery, and necessary agency involvement.

Interpretation

This DNP project investigated the fairly new and unstudied topic of an NPPU. This study aimed to assess if this new model of care was needed and what resources would be required to make it a successful implementation and quality improvement change for the local community of Yuma, Arizona. Findings from this study are supported by related research on transitional care and community paramedicine programs and models.

Implications for Clinical Practice

The implications for clinical practice of this project are to ultimately inform and develop a plan for a NPPU. By collecting information from key stakeholders to inform the development

of this model not only are necessary components of program development with varied input obtained, but buy-in, ownership, and ultimately success of the program are greatly increased.

Future plans include forming a working group comprised of project stakeholders who were invited to participate in the survey and expressed interest. The development of a NPPU model will involve multiple meetings with the working group. Data from this project will be used to develop aims and objectives for an NPPU intervention. With data from this project and involvement and input from working group members a design for the NPPU model will hopefully be developed and documented. Additionally, an evaluation framework, business plan, communications plan, and implementation plan must be developed. A pilot program will be launched, outcomes evaluated, and program aims and objectives optimized. After the pilot program the project will be fully implemented. To increase the sustainability of any intervention several things must occur. Ongoing monitoring and continuous review, to include ensuring that the model is functioning the way it was intended is essential (ACI, 2013). Continuing to have a local focus and promoting accountability encourages continued ownership (ACI, 2013). The model of care must also be optimized to ensure that it is functioning as efficiently as possible (ACI, 2013). Finally, to encourage ongoing sustainability the program will need to be evaluated and reviewed on an continuing basis so that modifications can occur to meet the ever changing needs of the community.

CONCLUSION

This DNP project examined the need for, required resources, and readiness for a NPPU in Yuma, Arizona. Data collected from survey responses provided insight into perceived benefits, negatives, appropriate care situations, local support, collaborative agencies, impact on patient

satisfaction and outcomes, as well as working group members from key stakeholders for a local NPPU. Project findings will serve as a foundation for future study, model development, and implementation of this new model (NPPU), with the ultimate aim to improve care delivery as well as patient outcomes.

APPENDIX A:

LOGIC MODEL FOR NURSE PRACTITIONER-PARAMEDIC UNIT

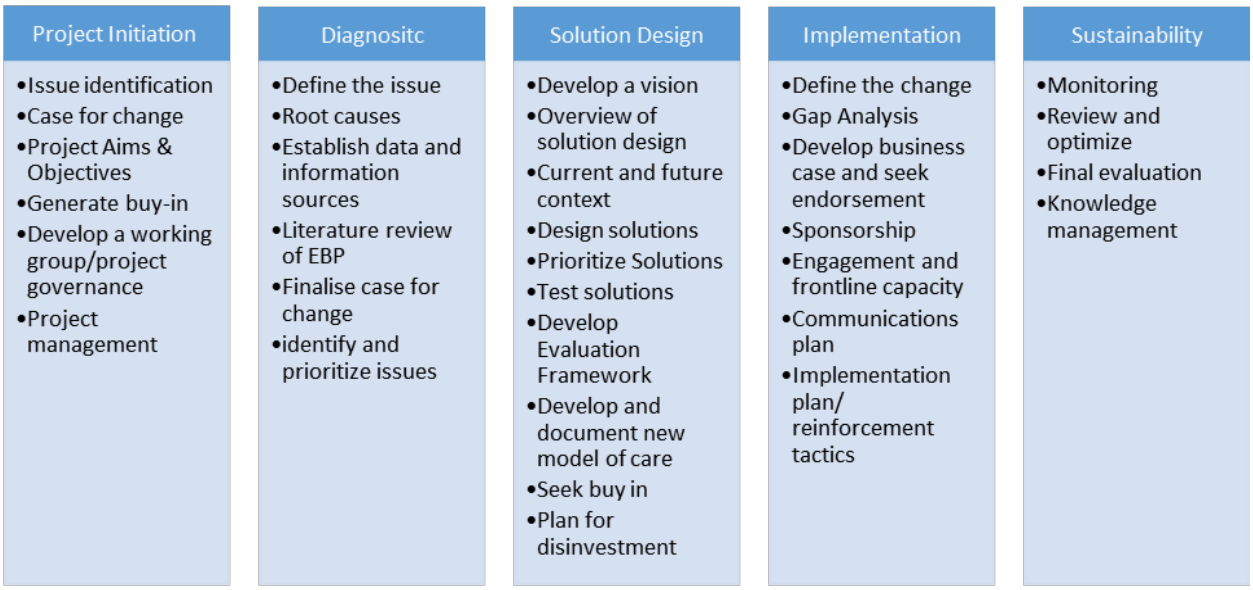
Logic Model for Nurse Practitioner-Paramedic Unit

Inputs	Constraints	Activities	Outputs	Outcomes Short Term	Long Term	Impact
Time	Funding	Meetings	Number of patients serviced	Creation of Usable and sustainable model	Decreased ambulance use	Improved and timely access to health care
Equipment/ materials	Transportation	Media/Technology	Number of patients diverted from ED transport	Delivery and utilization of model	Reduced ED visits	Appropriate resource allocation and utilization
Transportation (Vehicle)	Local policy	Process Development	Number of hours of service	Creation of a nurse practitioner-paramedic unit in Yuma, AZ		Improved patient outcomes
Staff (NP & Medic)	Local Regulations	Policy manual/standard operating procedures development				
Funding	State Regulations	Education				
Facilities	Facility	Training				
Research	Existing culture	Collaboration				
Collaboration with outside partners		Stakeholder input and involvement				

(*Model Adapted from Zaccagnini & White, 2014*)

APPENDIX B:

FRAMEWORK FOR DEVELOPING A NEW MODEL OF CARE


Project Initiation
•Issue identification
•Case for change
•Project Aims & Objectives
•Generate buy-in
•Develop a working group/project governance
•Project management
Diagnositc
•Define the issue
•Root causes
•Establish data and information sources
•Literature review of EBP
•Finalise case for change
•identify and prioritize issues
Solution Design
•Develop a vision
•Overview of solution design
•Current and future context
•Design solutions
•Prioritize Solutions
•Test solutions
•Develop Evaluation Framework
•Develop and document new model of care
•Seek buy in
•Plan for disinvestment
Implementation
•Define the change
•Gap Analysis
•Develop business case and seek endorsement
•Sponsorship
•Engagement and frontline capacity
•Communications plan
•Implementation plan/ reinforcement tactics
Sustainability
•Monitoring
•Review and optimize
•Final evaluation
•Knowledge management

APPENDIX C:

KEY STAKEHOLDER DISCLOSURE STATEMENT

NEED AND READINESS FOR A NURSE PRACTITIONER-PARAMEDIC UNIT IN RURAL YUMA, ARIZONA

Katherine Gompert

I am a Doctor of Nursing Practice student at the University of Arizona, College of Nursing. The purpose of this study is to perform a needs and readiness assessment for a Nurse Practitioner Paramedic Unit for Yuma, AZ. A nurse practitioner-paramedic unit involves a nurse practitioner and a paramedic outfitted in an ambulance that respond to non-emergent 911 calls with the intent of treating and discharging the patient on site or making appropriate referrals in order to avoid unnecessary emergency department transport.

If you choose to take part in this study you will be asked to complete a survey of 9 questions. It will take approximately 30 minutes to complete this survey. There are no foreseeable risks associated with participating in this research and you will receive no immediate benefit from your participation. The development and implementation of a Nurse Practitioner Paramedic Unit may offer improved patient outcomes and appropriate resource allocation for the residents of Yuma, Arizona. Survey responses are anonymous. By taking this survey you agree to have your responses used for research purposes.

If you choose to participate in the study, you may discontinue participation at any time without penalty. In addition, you may skip any question that you choose not to answer. By participating, you do not give up any personal legal rights you may have as a participant in this study. An Institutional Review Board responsible for human subjects' research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program at 520-626-6721 or online at http://rgw.arizona.edu/compliance/human-subjects-protection-program.

For questions, concerns, or complaints about the study, you may call the principal investigator, Katherine Gompert, RN, BSN at (928) 304-8009 or email at katherinegompert@email.arizona.edu.

Thank you in advance for your time, interest, and participation in this study and survey.

APPENDIX D:

KEY STAKEHOLDER SURVEY

Key Stakeholder Survey

(to be completed in Qualtrics)

1.) Do you feel that a nurse practitioner-paramedic unit is needed in Yuma, AZ? Why or why not?

2.) What benefits do you see as a result of this program? Do you see any negatives to this program?

3.) What resources do you think will be necessary for the success of a nurse practitioner-paramedic unit in Yuma, AZ?

4.) What situations do you think would be appropriate for care delivery by a nurse practitioner-paramedic unit?

5.) What protocols do you feel would be necessary to the success of a nurse practitioner-paramedic unit in Yuma, AZ?

6.) What agencies do you think would need to be involved in order to make this model of care successful? Would you be willing to contract with them?

7.) Do you think this service would increase patient satisfaction and improve patient outcomes? Why, or why not?

8.) Would you support this type of program being implemented in Yuma, Arizona? Why or why not?

9.) Would you be interested in being a part of a working group for the future development of this type of model of care?

APPENDIX E:

SOUTHWEST EMERGENCY PHYSICIANS SURVEY CONSENT

August 2, 2016

To Whom It May Concern:

Kate Gompert, RN has my formal consent to conduct survey on SWEP Providers in regards to Nurse Practitioner/Paramedic Unit.

Please contact me if you should have any questions or concerns.

Respectfully,

Phillip C. Richemont, MD
Chair, Department of Emergency
Physicians COO, Southwest Emergency
Physicians

APPENDIX F:

YUMA FIRE DEPARTMENT CONSENT TO SURVEY

City of Yuma Fire Department
Professional Services Division

Memo

To: Katherine Gompert, R.N.

From: Joseph S Waterford, EMS Division Chief

CC: Steve Irr, Fire Chief

Date: 08/08/2016

Re: Letter of Formal Consent

The City of Yuma Fire Department is giving Katherine Gompert consent to distribute surveys to any and all members of The City of Yuma Fire Department members for her Doctoral project *"Needs and Readiness for a Nurse Practitioner-Paramedic unit in rural Yuma, AZ."*. Mrs. Gompert also has consent to openly interact with all the members of The City of Yuma Fire Department, to fulfill the requirements of her project. Mrs. Gompert is also welcomed to ride along, as needed, to physically observe paramedics working in the field. We require that Mrs. Gompert fully complies with all State and Federal laws and standards of patient confidently.

Joseph S. Waterford
Joseph S. Waterford
EMS Division Chief, City of Yuma fire Department

APPENDIX G:

ALLIED HEALTH PROVIDERS OF YUMA CONSENT TO SURVEY

Allied Health Providers of Yuma
Yuma, Arizona

RE: Katherine Gompert Project

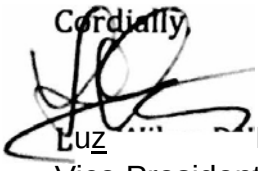
Inquiry To Whom It May Concern:

Katherine Gompert, a DNP student at the University of Arizona, College of Nu rsing, has been granted permission to utilize our organization's list serve of approximately 65 members in the Yuma community for the purpose of assisting with her project inquiry titled:

NEED AND READI NESS FOR A NU RSE PRACTITIO N ER-PARAM EDIC UNIT IN RURAL Y UMA, ARIZONA

We will be emailing her consent form and survey link to our members. She will not have access to member names or email addresses. If there are any questions, our contact information is below.

Cordially,



Luz P, RN, ANP-BC
Vice President
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uma ahpy123@gmail.com
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