Enhancing Diagnosis and Management of Hypertension in Primary Care through Training and Education of MA Staff

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Introduction

- Catherine Resnick, RN, BSN, DNP Candidate
- Chair: Jean McCalmont, DNP, FNP-BC
- Chair: Jacqueline Webb, DNP, FNP-BC
- Clinic Medical Director: Diana Burden, DNP, FNP-BC
- Clinic Manager: April Pham, CMA

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Practicum Experience

- VA Family Practice in Klamath Falls – 160 hours
- East Cascade Women's Group (OB-GYN) – 20 hours
- Mosaic Family Medicine Clinic in Prineville – 120 hours
- Summit Gastroenterology – 130 hours
- Cascade East Family Medicine Center – 160 hours
- High Lakes Health Center – 200 hours
- Mosaic Family Medicine Clinic in Prineville – 200 hours

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The Problem

- Uncontrolled hypertension is a major cause of cardiovascular disease: **the leading cause of death for Americans** (Poznyak, 2022).

- Current evidence stresses the importance of accurate blood pressure (BP) measurement as the basis of hypertension screening, diagnosis, and management. A **lack of standardization in BP measurement** is a major problem in current practice and negatively impacts patient care (John et al., 2021).

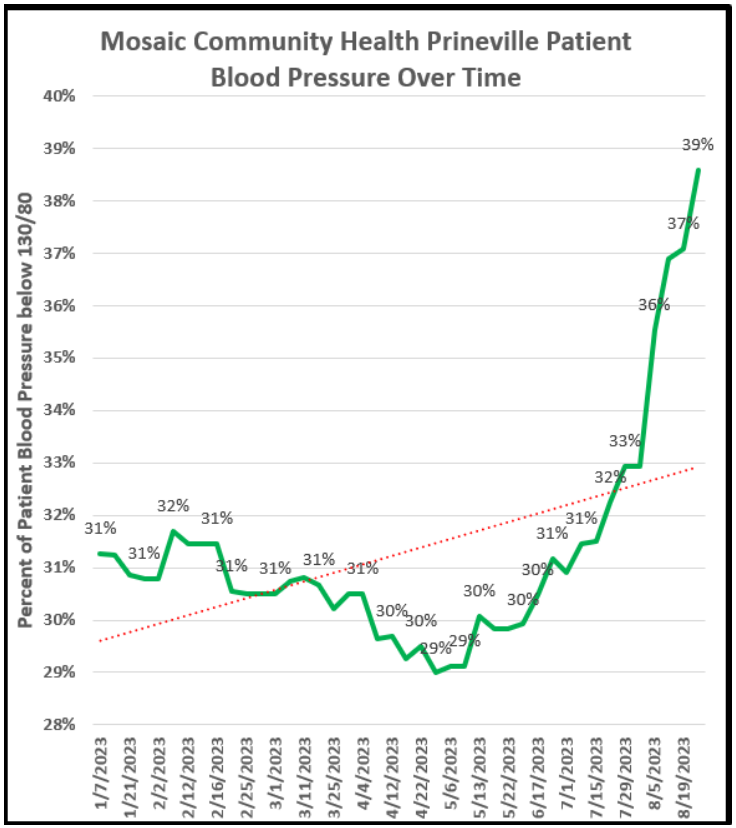
- Research suggests that even those who have received proper training may still perform blood pressure measurement **inaccurately** (Brady et al., 2020).

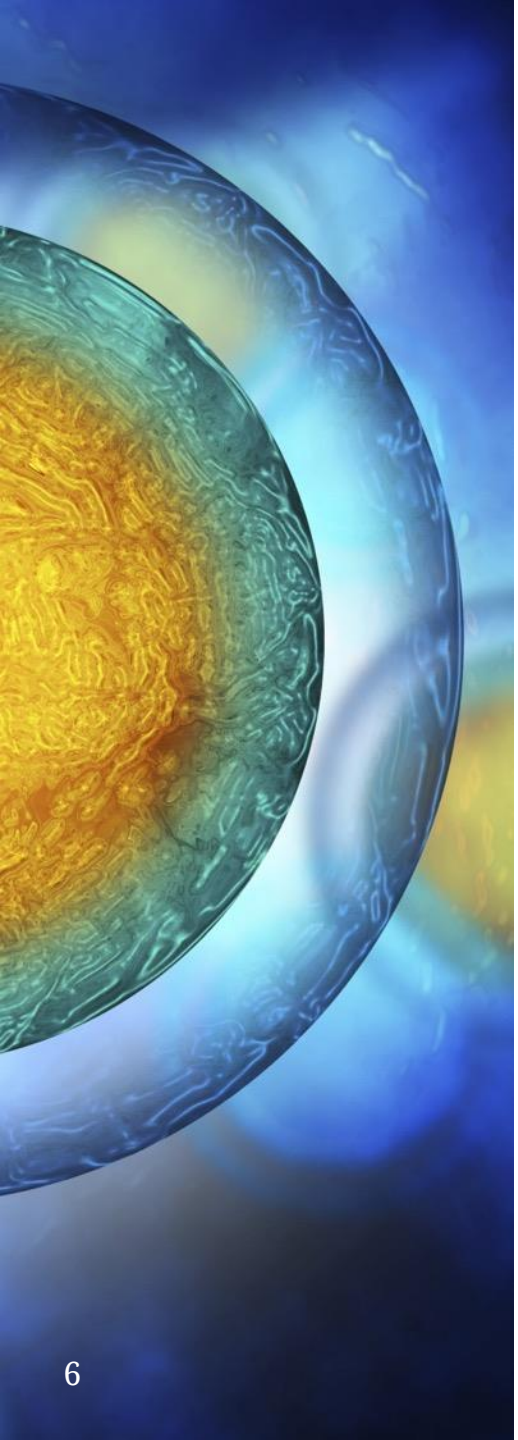
- MA training and re-training is **not standardized** and varies wildly, as this is a **unlicensed position** with optional certifications (Fraher et al., 2021).

The Local Problem

- A rural family medicine clinic in Oregon identified rates of uncontrolled hypertension as a key area to improve on and welcomed quality improvement projects. At the onset of the project only **37%** of patients diagnosed with hypertension were at goal (BP≤130/80).

- Key issues identified that were contributing to this problem were a **lack of standardization in MA blood pressure measurement** and a **lack of access to evidence-based hypertension patient education**.





Available Knowledge

- **Retraining** staff on blood pressure measurement has successfully resulted in more accurate blood pressure measurements (Hayer et al., 2021).
- **Patient-centered education** delivered by licensed providers increases patient adherence to medical recommendations and improves blood pressure control (Nanyonga et al., 2022 & Tam et al., 2020).
- Lifestyle modifiers including the **low sodium DASH diet and exercise** with the goal of weight loss have the largest impact on blood pressure reduction (AHA, 2022).
- It has been suggested that **expanding MA roles** to include patient education may improve population health outcomes and increase access to care (Berg, 2019; Figueroa et al., 2021).

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Study Aims

- The primary aim of this project was to enhance diagnosis and management of hypertension in primary care through training and education of MA staff to standardize MA BP measurement in the clinic measured through **achieving a 75% or higher score** on the post-intervention knowledge survey.

- The secondary aim was for MAs to report **increased confidence** in measuring BPs and delivering patient education on hypertension lifestyle modifications.

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Project Implementation

Setting/Context

- Setting:
  - A family medicine clinic located in rural Central Oregon serving a city of approximately 12,000.
  - The clinic reports approximately 900 patients diagnosed with hypertension with only **37%** currently meeting BP goals (<130/80).
  - Crook County has the **highest percent of people** (6.3%) **with cardiovascular disease** in Central Oregon (COHC, 2019).
- Context:
  - Staff consists of three FNPs, one part-time MD, one RN, and six MAs.

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Methods/Intervention

- A 23 question **pre-intervention knowledge survey** was sent to all of the MAs via email to assess knowledge of BP measurement and lifestyle modifications.
- An **educational training video** was created and shared with all MA staff via email along with a 26 question **post-intervention knowledge survey** for comparison.
- **Intervention Video**:
  - A step-by-step process on how to obtain accurate blood pressure readings and the intervals at which repeat measurement should be taken.
  - Education on lifestyle modifications with a focus on the DASH diet, reduced sodium intake, and appropriate physical activity.

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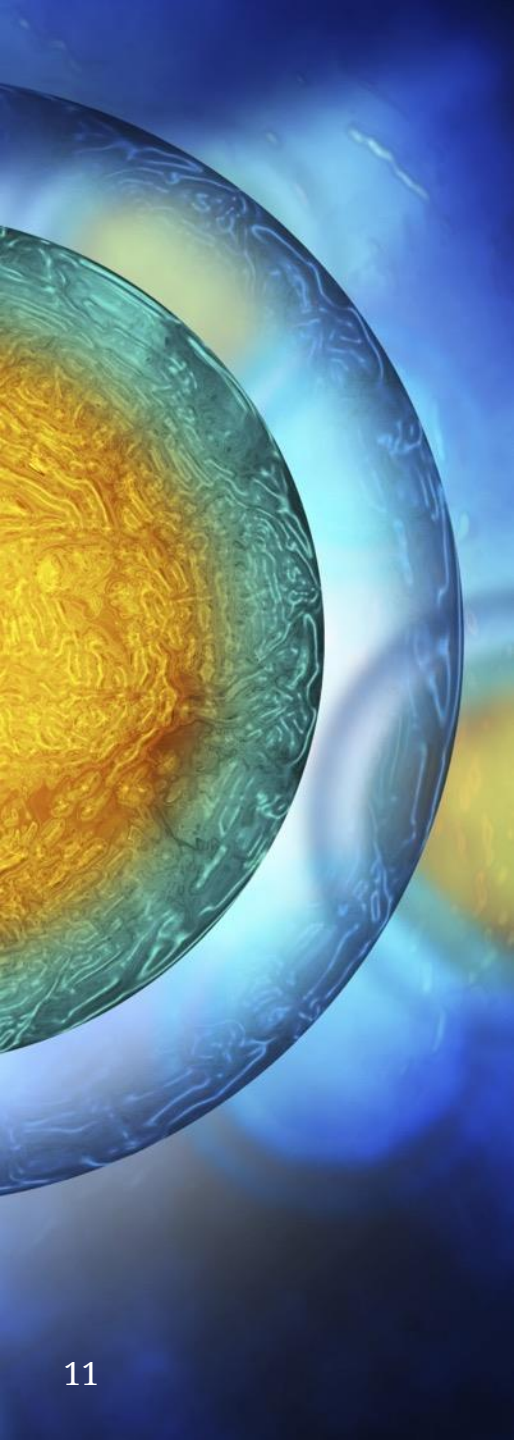

Evolution of Project

- Originally considered the creation of a **hypertension education packet** that could be shared by MAs but this idea was delayed in consultation with my Chairs due to need for further development of the MA education role.

- The format of the intervention was shifted from a live class to **asynchronous video** to better meet the needs of the clinic during a busy time of year.

- Initial response rates to the post-intervention knowledge survey were low and yielded insufficient viable data so a **second PDSA cycle** was completed using identical questions with the interventional video embedded.

- **Inclusion criteria** for analysis were adopted to exclude any participants that failed to answer any knowledge questions.

- **Question 11 was dropped** from analysis of the pre-intervention knowledge survey due to no longer being relevant. The **exercise question was dropped** from analysis of both surveys due to being deemed a poorly written question.

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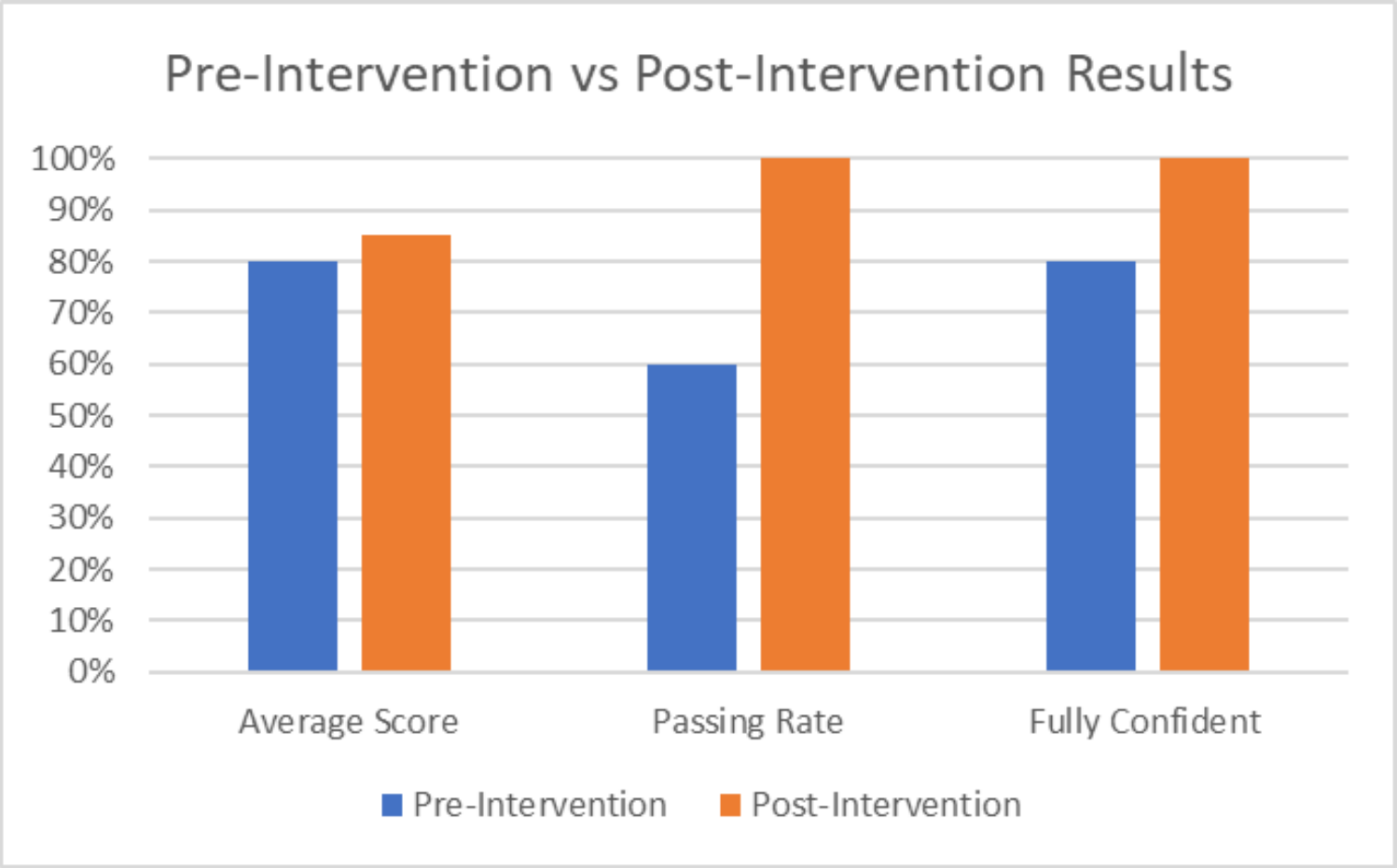
Key Findings & Results



Passing defined as >75% on knowledge-based questions

Key Findings & Results

Qualitative results of pre-intervention knowledge survey

- **100%** of MAs reported that **patient positioning issues and talking** during measurement were barriers to obtaining accurate BP measurements.

- **40%** of MAs reported issues with **BP cuff size availability or machines** which impacted their ability to take accurate BP measurement.

Qualitative results of post-intervention knowledge survey

- **67%** of MAs reported **more hands-on training** would improve their ability to perform accurate BP measurement.

- **83%** of MAs reported that having relevant **educational handouts** would improve their ability to deliver patient education on lifestyle modification.

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Reflection & Conclusion

Summary & Recommendations

- The results of this project are consistent with the research and support Hayer's assertion of the **importance of frequent MA retraining** on BP measurement (Hayer et al., 2022).
- The results suggest that **updating equipment and reevaluating workflows** could significantly improve the quality of BP measurements in the clinic.
- Implementation of annual **hands-on retraining** on BP measurement can help ensure standardization.
- Place **posters** in key areas to reinforce accurate BP measurement.
- **Clarify ideal MA role for supplementing education** and seek external certification or develop internal training curriculum and resources.
- DNPs should continue to act as **leaders** to identify areas in need of improvement within their clinics and utilize evidence-based research to **support enhancing the role of auxiliary staff**.

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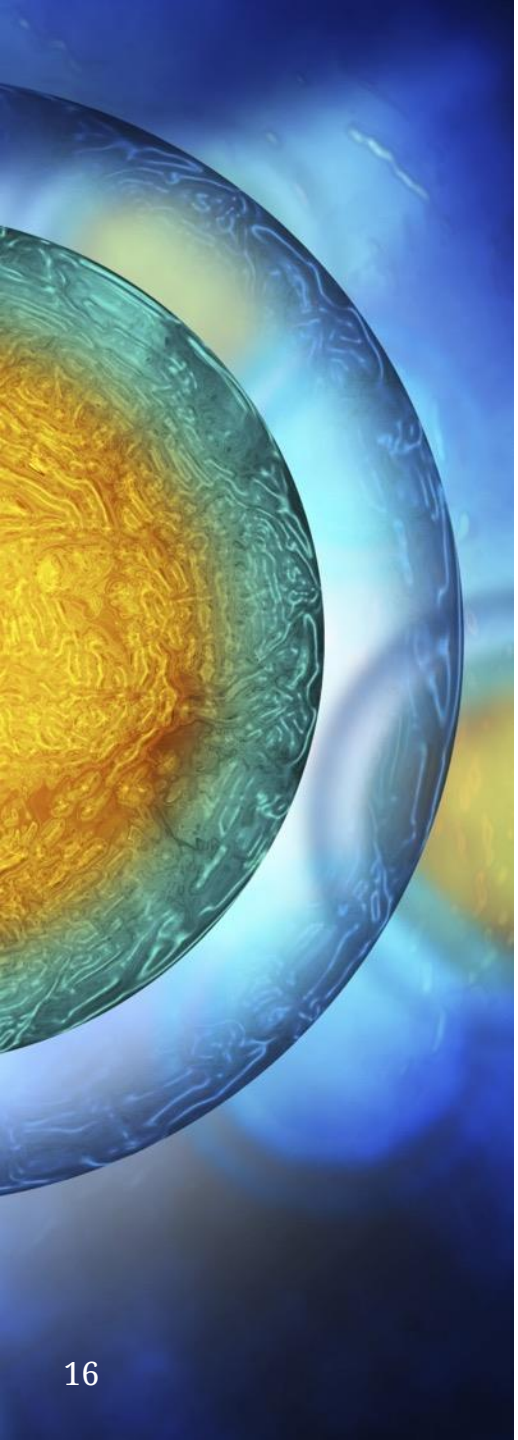

Next Steps for Me

- I plan to take everything I learned through this project about how important it is to match study designs with goals and use it in future quality improvement projects to be more impactful.

- I plan to apply to a family practice clinic in Loma Linda, California where my husband will be completing his residency in Psychiatry.

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Thank You