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A Novel Approach for Increasing Blood Pressure Screening in 3-year-old Patients

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BACKGROUND

- 16% of children have high blood pressure¹ (BP)
- High BP can be a sign of renal disease²
- May lead to hypertension & organ damage²
- Missing BP screening is a missed opportunity to initiate early discussions about lifestyle & diet³
- AAP recommends screening annually from age 3³

LOCAL PROBLEM

- At UVMHC's largest pediatric primary care clinic over 25% of age 3 patients not screened
- Surveys and interviews with clinic staff indicated BP was attempted for 100% of patients
- Barriers to successful BP screening included:



- Patients react to clinical-looking BP cuff
- Parent reluctance & lack of assistance
- Age 3 inability to remain still & calm

PURPOSE

- Identify barriers to obtaining BP screenings
- Develop & implement an intervention to reduce barriers & increase rates of screenings
- Utilize Davis' Technology Acceptance Model⁴
 - Assess workflow prior to intervention
 - Identify modifiable inefficiencies
 - Streamlined workflow will lead to greater adoption of intervention

INTERVENTIONS

- Educational poster, handout, & video presentation

**U-peds Blood Pressure (BP)
Quality Improvement Project**



Why do we take pediatric BP?

- >16% of children have elevated BP¹
- Pediatric ↑ BP continues to adulthood²
- ↑ BP in adulthood leads to organ damage³

Tips & Tricks for Getting Accurate BPs

- Explain the process; preview each step
- Involve the family; older sibling?
 - Be aware of adult's energy / anxiety
 - Calm adult to calm the patient
 - Enlist adult help with clear direction
- Praise for patient and for their adult
- Let patient play with equipment; try on someone else first
- Crying is OK; can mean effective coping
- Use humor, distraction, & celebration



Could a toy improve the BP experience?

- Covers the cuff
- Mimics the hugging action of the cuff
- Introduces something non-clinical to clinical environment

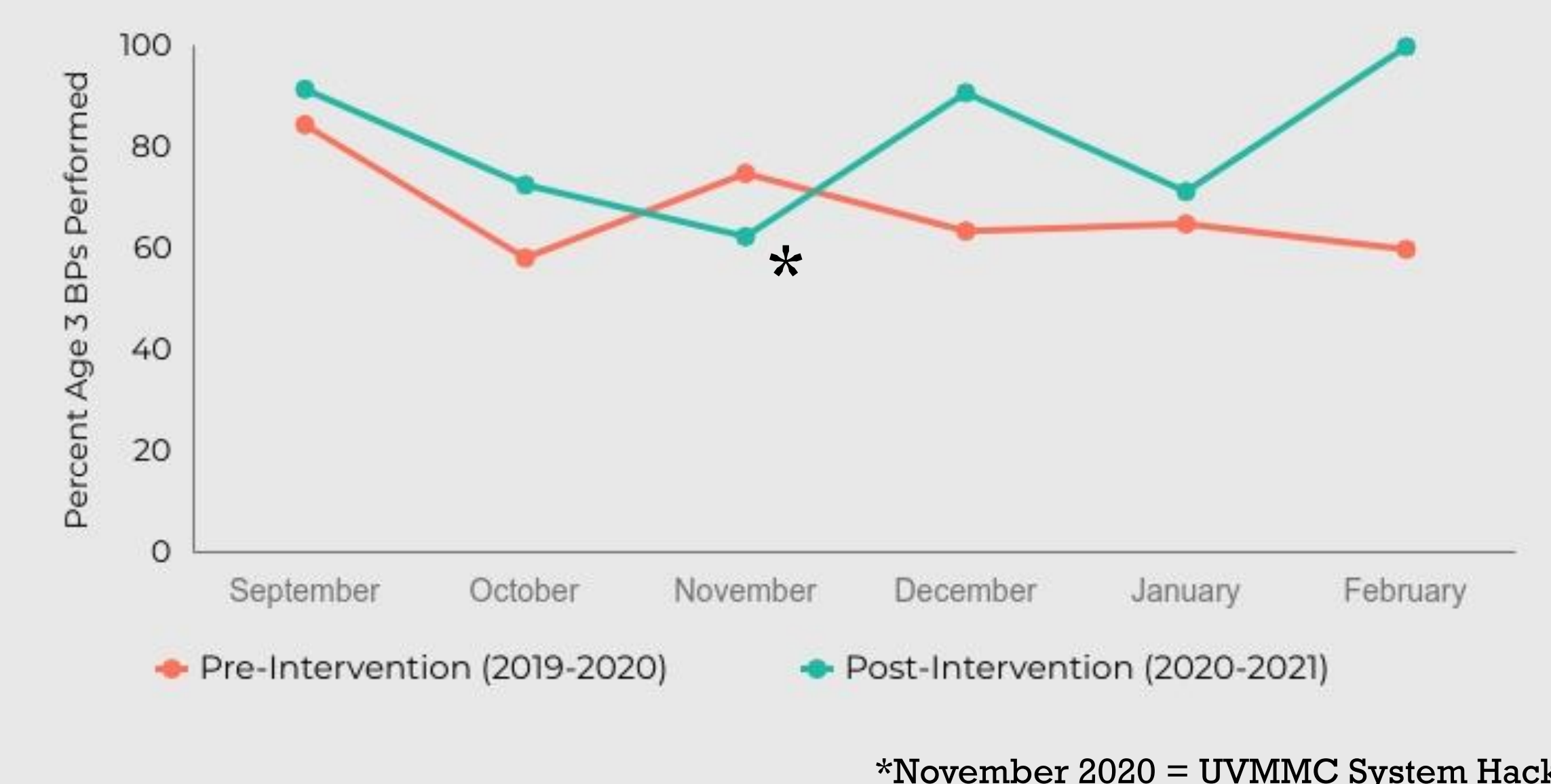
- BP aid, "Snuggy" stuffed animal
 - Covers clinical-looking BP cuff
 - Mimics 'hugging' action of cuff
 - Single-use, taken home after
 - Cost < \$2.00 per Snuggy



RESULTS

- Mean % BP rose from **66.7%** to **81.8%**
- Increase in measures of staff confidence & knowledge, reported desire to use Snuggy
- Age 3 patients enthusiastic about Snuggy
- Clinic budgeted for continued use of Snuggy

Pre- and Post-Intervention Monthly Blood Pressure Trends at U-Peds Clinic



CONCLUSIONS

- A few easy-to-implement interventions improved the experience of first time BPs for 3-year-old patients and clinic staff alike
- Continued use of Snuggy demonstrates 'buy-in' of clinic staff, sustainability of project

NEXT STEPS

- Repeat project in family practice; ages 3-10

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