Introduction

- Children with medical complexity (CMC) are characterized by having multiple significant health problems that affect multiple organ systems and cause functional limitations.
- These chronic health conditions and functional limitations create a higher need for healthcare and technology utilization.
- CMC populations continue to grow because of improvements in diagnosis and medical treatments and increasing public and provider awareness.
- CMC require intensive and costly care, which poses unique challenges and barriers for primary care providers (PCP).
- There are limited studies examining educational and knowledge gaps PCP face when caring for CMC in Kansas and Missouri.
- This study aims to identify barriers and education gaps that limit PCP and residents' self-efficacy when caring for CMC in rural and urban settings.

Methods

- A one-time cross-sectional REDCap survey adapted from previously published surveys was disseminated to PCP in MO and KS through Children's Mercy Hospital, The University of Kansas Hospital, the Office of Rural Health Education, and the MO and KS chapters of the American Academy of Pediatrics.

STUDY POPULATION:
- 121 PCP completed the survey (30 Pediatricians, 29 Pediatric Residents, 1 Family Medicine Physician Assistant, 121 PCP completed the survey (30 Pediatricians, 29 Pediatric Residents, 4 Pediatric Nurse Practitioners, 32 Family Medicine Residents, 1 Family Medicine Physician Assistant).
- 8 surveys were excluded due to incomplete surveys. 9 other surveys were excluded due to working in a complex care clinic. 104 surveys were included in the final analysis.

DATA COLLECTION:
- The survey was disseminated via email and data was collected through REDCap from July, 2018 to October, 2018. The data collected was self-identified and categorical.

STATISTICAL ANALYSIS:
- Statistical analysis was performed using a two-tailed ANOVA with a p value of 0.05.

Results

- Table 1: PCP Perceived Barriers in Caring for CMC
- Table 2: PCP Perceived Preparedness in Handling Common Medical Concerns for CMC
- Table 3: PCP Perceived Comfort in Providing Primary Care to CMC Who Use Various Technology
- Table 4: Comparison of Perceived Barriers in Caring for CMC
- Table 5: Comparison of Perceived Preparedness in Handling Common Medical Concerns for CMC
- Table 6: Comparison of Perceived Comfort in Providing Primary Care to CMC Who Use Various Technology
- Table 7: Comparison of Perceived Ways to Improve CMC Care
- Table 8: Comparison of Preferred Education Content Delivery
- Table 9: Comparison of Preferred Education Content Delivery

Discussion

- Providers in this study did not feel that reimbursement for services, coding and billing or lack of support services were a significant barrier in caring for CMC, which is a surprising difference from the current literature. This change signals that MO and KS providers who care for CMC face unique barriers. This study also found that providers were not prepared and did not feel comfortable in handling a variety of common medical concerns or providing primary care to CMC when those patients use a variety of medical technology. This information will be important in the primary or continuing education of providers who care for CMC in order to ensure the best possible care.
- Interestingly, the perceived barriers, preparedness to handle common medical concerns and comfort in using various technology differed between practicing providers and residents as well as between providers in urban and rural practice location.
- PCP also differed on the best ways to receive education and improve care for CMC.

Conclusions

- Children with Medical Complexity pose unique challenges to primary care providers.
- Barriers to providing care for CMC can negatively impact patient care.
- Providers identified specific medical conditions and technologies that pose unique opportunities for continuing education.
- Providers identified specific barriers that can be used to guide resource development for primary care providers to better care for CMC.
- We found that perceived barriers, level of preparedness, and preferred education intervention while caring for CMC varied based on level of training and practice location.
- When developing strategies for education and improving care delivery for CMC these factors must be considered.

Limitations

- The external validity of the results may be restricted due to the cross-sectional nature of our study.
- External validity of the results for rural providers may be restricted due to the small sample size.

References