FAMILY MEDICINE EDUCATION REFORM:

A Discursive Analysis From Focus Groups at SRPC Rural and Remote Conference 2023

Organized By:
Jen Barr, Dr. Kristy Penner, Dr. Sarah Lespérance and
Compiled by: Justin Norton

Society of Rural Physicians Canada
Director of Analytics - Algebraic Capital , BScH Mathematics

May 2023

CONTENTS

01. INTRODUCTION

Family medicine, an essential pillar of the healthcare system, has been experiencing significant transitions over recent years. These changes, present a series of challenges and necessitate thoughtful, strategic reforms in the education and training of future physicians. In analyzing a series of discussions at the SRPC Rural and Remote Conference 2023 surrounding these issues, several key themes and priorities have emerged, each warranting further exploration.

02. SUMMARY OF BREAKOUT GROUP CONVERSATIONS

In the focus group on Family Medicine Education Reform, participants discussed their backgrounds and their unique teaching communities across different provinces and territories. They delved into the resources needed from the College of Family Physicians of Canada (CFPC) to deepen their understanding of education reform and what resources their specific rural and remote communities would need to extend training to postgraduate family medicine residents.

Participants also contemplated how rural and remote communities and educators could contribute to the national curriculum priority of enhanced transition to practice for graduates. The conversation further extended to how their current rural and remote practices align with other national curriculum priorities such as:

Optimizing scope	Inter-professional care and sustained practice	Caring for under served communities

Skill building in areas of societal need such as home and long-term care, addiction, mental health, emergency/acute care medicine, indigenous health, health equity and anti-racism, and virtual care and health informatics.

The following section summarizes the scribes notes of the focus groups that assembled to discuss.

2.1 Rural Versus Urban Residency

The first major theme is the disparity between rural and urban residency training. Rural residencies typically provide a broader scope of practice, fostering more adaptability in early-career physicians. This is particularly useful when they transition into practice, particularly in diverse, rural communities. Conversely, urban residencies, which lean towards specialization, might not offer the same breadth of experience. The call here is to reconcile this divide by integrating a wider range of experiences into urban residencies, thereby producing more adaptable physicians capable of serving diverse community needs.

2.2 The Role of Mentorship

Mentorship plays a vital role in the transition from residency to independent practice. A recurring theme from multiple participants is a proposed shift from the traditional residency model towards a mentorship or apprenticeship model. They argue that real-world experiences, guided by experienced physicians, can better prepare residents for the realities of running a clinic. Such a model exposes residents to the practical aspects of the job, such as managing administrative tasks and understanding billing procedures, ultimately smoothing their transition into practice.

2.3 Reforming Family Medicine Education

The urgent need to reform the Family Medicine curriculum is a widely held consensus. The proposed ideas target several key areas for inclusion or expansion, including health equity and anti-racism practices, mental health and addiction services, inter-professional team collaboration, virtual care, and general practice preparedness. This proposed reform indicates a shift towards a more holisticapproach to patient care, aligning with the evolving needs of the communities that family physicians serve.

2.4 Curriculum Focus on Community Needs

There is a strong sentiment regarding the curriculum meeting specific community needs, especially for rural communities that often require broad-scope family medicine practitioners. The discussions suggest that students need practical, not just theoretical, preparation for the realities of serving in these communities. As per the conversation, the design of education should focus on community needs, emphasizing a tailored, community-centric approach to medical education.

2.5 Transition to Practice

The transition from resident to independent practitioner presents a steep learning curve for new graduates. Challenges include understanding administrative procedures, managing clinic flow, and potentially relocating between provinces or cities. By better preparing residents for these realities during their training, the transition into practice can be significantly eased.

2.6 Concerns about Sub-specialization

An increasing tendency towards sub-specialization in family medicine raises concerns. An extended training period or overemphasis on certain aspects of the curriculum could unintentionally push more students towards sub-specialization, leading to a potential shortage of general family medicine practitioners, especially in rural areas. This concern underscores the need for careful consideration in curriculum design to ensure balanced emphasis on both general and specialized areas.

2.7 Third-Year Residency

There is noticeable skepticism surrounding the idea of an additional third year of residency. Critics argue that this could slow down the pipeline of family medicine residents, potentially limiting the number of practitioners entering the field. However, some suggest that resources could be better used in a graduated support system for residents post-graduation. This approach would allow residents to seek further training in areas they identify as weaknesses, providing a more tailored and relevant educational experience.

2.8 The Power of Apprenticeship

Building on this sentiment, participants underscore the potential value of an apprenticeship-style third year. This model could bridge the gap between being a resident and being a staff physician, ensuring a smoother transition and better preparing graduates for the realities of practice. This perspective is supported by the reality that newly graduated physicians often face a steep learning curve, suggesting that an additional year of guided practice could enhance readiness.

2.9 Re-imagining Resource Allocation

A provocative proposal emerges around rethinking resource allocation. Instead of extending residency with a contentious third year, some participants suggest channeling resources into a graduated support system for residents postgraduation. This innovative approach could offer better resources and support for new graduates, focusing on identified areas of weakness and facilitating continue learning and development in the early years of practice. The argument is that a prolonged residency could drain resources that could be better utilized elsewhere, perhaps reducing the effectiveness of medical education and further contributing to a perceived decline in the quality of family medicine.

03. CONCLUSION

Family medicine stands at a pivotal juncture. Evolving scope, changing community needs, and the shifting landscape of medical education necessitate comprehensive reforms. The themes emerging from these discussions - reconciling rural and urban residency experiences, the critical role of mentorship, the need for curriculum reform, the focus on community needs, easing the transition into practice, concerns about sub-specialization, skepticism towards a third year of residency, the potential power of apprenticeship, and innovative ideas around resource allocation - collectively illuminate the challenges and opportunities facing family medicine education. The somewhat controversial concept of a third year of residency emerges as a point of contention, further illustrating the multifaceted, complex considerations that must be navigated in the journey towards reform.

04. WORD CLOUDS SENTIMENT ANALYSIS OF DISCUSSION GROUPS

The sentiment analyses conducted in this project utilized a variety of widely adopted Python (programming language) libraries that specialize in natural language processing and data visualization. These libraries include VaderSentiment, WordCloud, matplotlib, and nltk.

The VaderSentiment library is engaged to perform sentiment analysis on the text. It understands the polarity of a word (positive or negative) but also the intensity of the sentiment. Making it a strong choice for this analysis.

Each sentence within the text is processed through VaderSentiment's sentiment intensity anlyzer, which then assigns four scores: 'compound', 'negative', 'neutral', and 'positive'. The 'compound' score represents the aggregated sentiment based on all three other scores and ranges from -1 (extremely negative) to +1 (extremely positive).

The sentences are then categorized as positive, neutral, or negative based on these 'compound' scores. The counts of these sentiment classes are subsequently normalized by the total count, resulting in a relative proportion of each sentiment class. This normalization process effectively translates raw sentiment scores into relative frequencies, offering a more intuitive understanding of the sentiment distribution within the text.

Word cloud visualizations are created using the WordCloud library, which generates an image made up of words from the text. The size and color of each word in the word cloud signify its frequency within the text. Word frequencies are determined using the Counter object from the collections library, considering only those words that aren't part of NLTK's English stopwords set.

For optimal flexibility in the analysis process, the entire procedure is encapsulated within a function called "analyze sentiment". This function takes as its inputs the text to be analyzed, any additional custom stopwords, and an option to save the produced figures.

The complete code for this sentiment analysis can be found at: https://github.com/nordyjay/srpc_2023_reform_analysis.

4.1 BREAKOUT GROUP SUMMARY NLP ANALYTICS

Overall the sentiment from the summarizing of breakout groups is predominately negative and anecdotally that was felt both during the presentation and in the breakout groups. However there was a fair bit of optimism observed in the proposed solutions form the breakout groups. While extracting realization from word clouds is a skill in itself it would appear word cloud presents a fairly balanced classification of word weightings.

Breakout Groups Summary Word Cloud
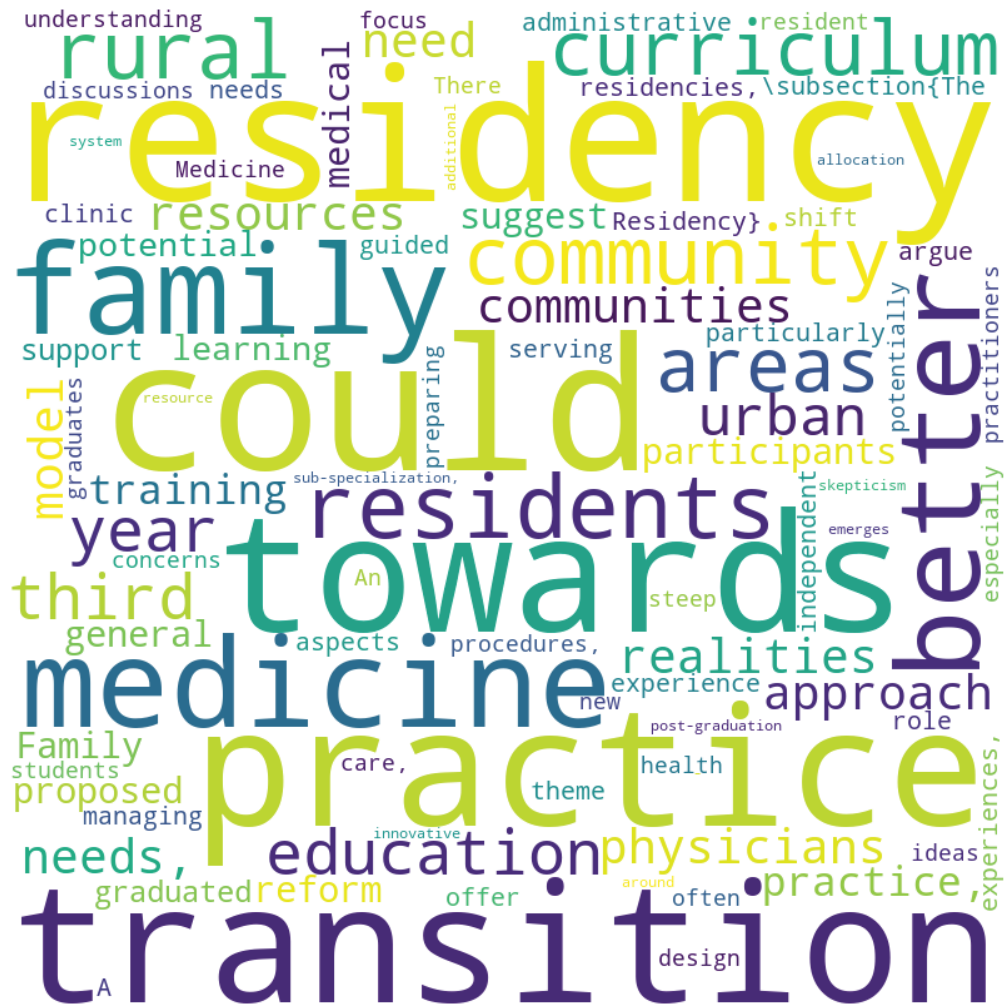
Normalized Summary text Summary Sentiment Classification
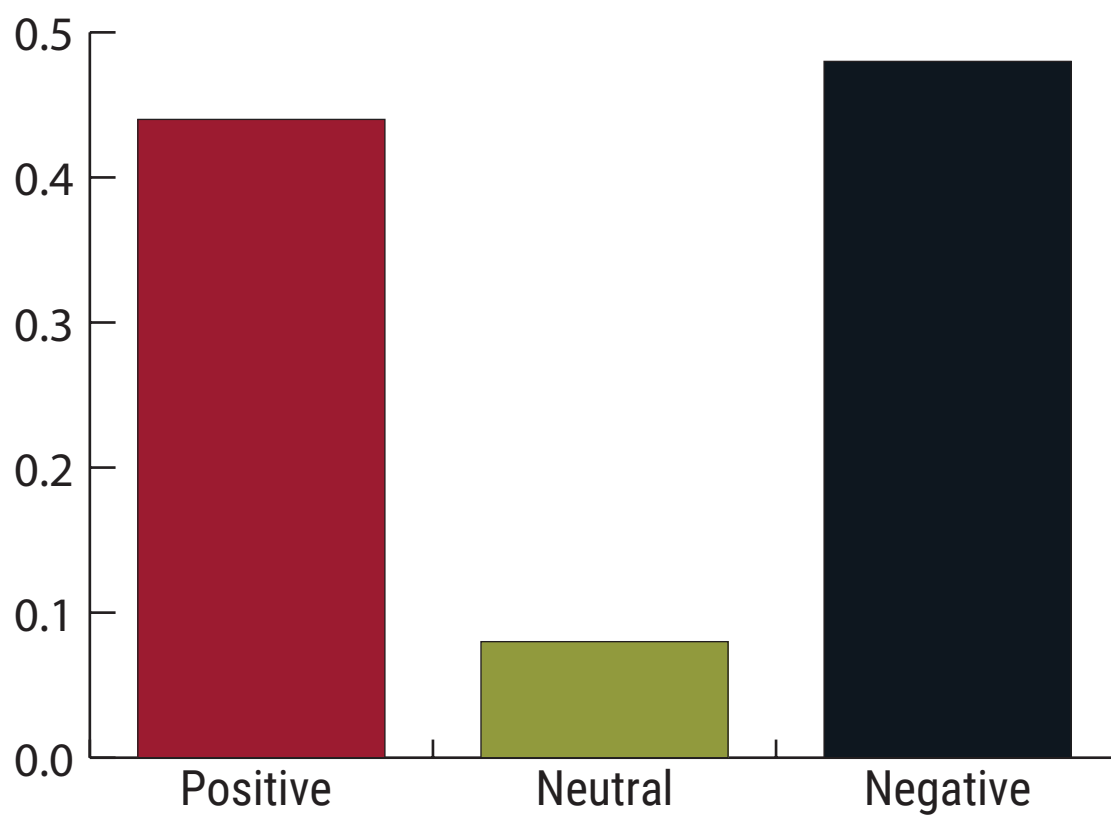
0.5 LIMITATIONS AND IMPROVEMENTS

An overall limitation is the shortness of data that was used in this analysis. This is compounded by the fact that note takers produced different length summaries and may themselves have selection bias on what is included in the notes. To improve insights from these breakout session one potential option is to have a moderator to keep the conversation on track and record the audio and convert to text for a more thorough and unbiased analysis.