



Abstract

We envision a healthcare system that promotes prevention of illness rather than purely relying on treating and curing disease. It is therefore imperative that future physicians are trained to identify and address the social factors that impact health. Despite the clear need for teaching the social determinants of health in pre-clinical medical education, integrating these principles into the curriculum continues to be a challenge. The University of Vermont's Larner College of Medicine has recently incorporated a "Social Medicine Theme of the Week" to acknowledge the specific ways social and economic factors influence health outcomes and contribute to persistent disparities within the health care system.

The aim of this project was to present these themes through online infographics to provide students with a resource to acquire foundational knowledge specific to social medicine topics. To create content that was both engaging and accessible, we utilized the infographic generator website Venngage. Each infographic integrated a social medicine theme that pertained to the basic science content taught that week. The body of the infographic included a summary of the topic along with visually enhanced representations of data (e.g., timelines, charts, statistics). In addition, embedded hyperlinks directed students to multimedia resources including podcasts, TED talks, documentaries, and recently published articles. Infographics were delivered to students as an independent learning session within their curriculum calendar.

Advantages of this format include the ease in accessibility and the ability cover a wide range of topics in an easily digestible manner. Because these topics evolve rapidly, this approach allows materials to be continually updated to reflect the most recent literature. This meaningful approach to teaching the social determinants of health is an important step towards inspiring the next generation of physicians to address inequities and actively work towards social change.

Introduction

The Social Medicine Theme of the Week was developed in 2018 when a group of student advocates at UVM Larner were concerned that their medical curriculum was not adequately addressing the Social Determinants of Health. These concerns drove this group, now known as the Social Justice Coalition, to create a Social Medicine Theme of the Week (SMTW) intervention as part of a larger Social Medicine Curriculum. For each week of the first and second years of the preclinical curriculum, this group developed a Social Medicine Theme with learning objectives connected to what was being taught in the foundational science curriculum.¹ The theme of the week was originally introduced through student led in-class announcements with learning objectives posted to the medical student calendar with other coursework. In March 2020, the curriculum delivery became fully remote in response to the nationwide Covid-19 pandemic. To adapt to the loss of in-class announcements, we formatted the theme of the week into infographic-styled newsletters. These newsletters included a brief introduction of the theme of the week as well as hyperlinks to variety of optional multi-media resources to encourage independent learning on the topic.

Methodology and Results

Figure 1: Example infographic outlining components of the Stigma & Mental Health newsletter



QR Code to Hyperlinked Infographic

Brief introduction of theme of the week to orient reader, highlighting important definitions and terminology

Visually enhanced representations of data outlining prevalence and disparities in treatment utilization

Hyperlinked resources on the topic of week's theme to encourage further self-education organized into three categories: readings, video, and podcasts

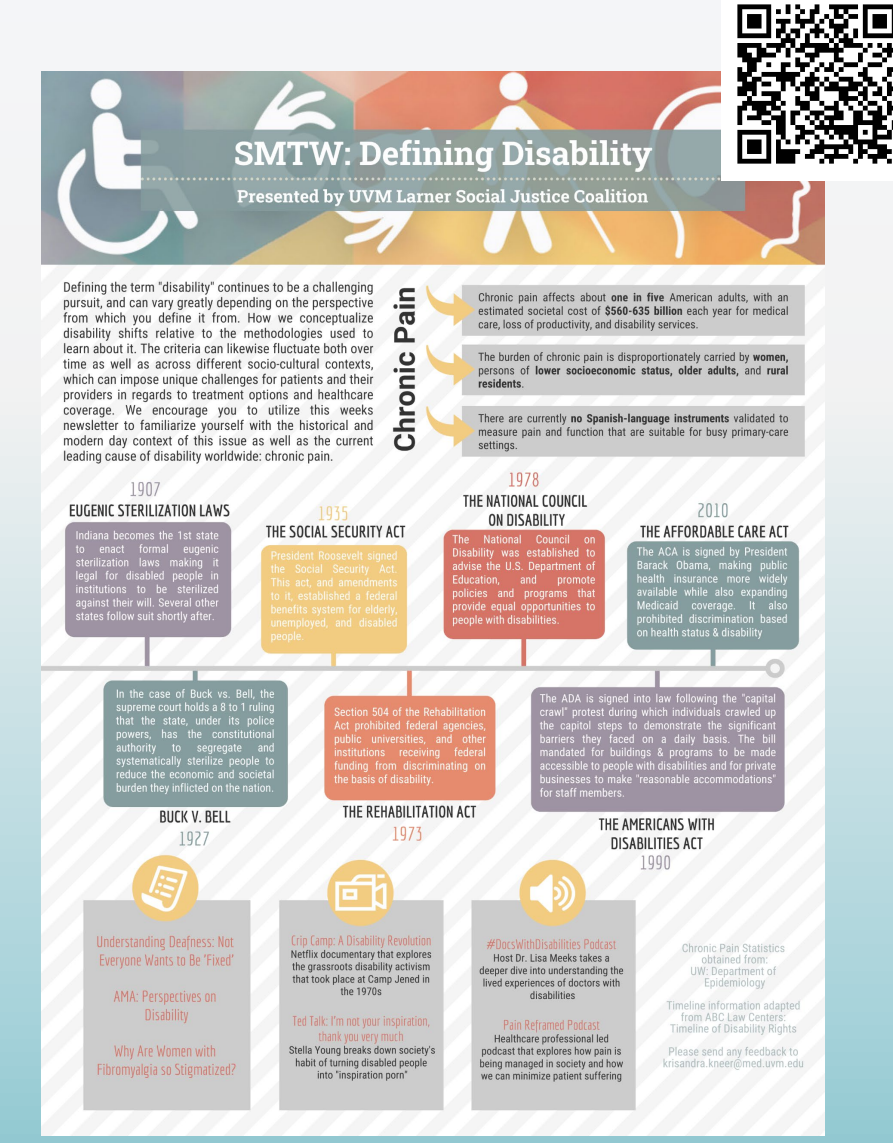


Figure 2: SMTW Defining Disability Newsletter focused on the historical context of disability rights in the United States including an abbreviated timeline of notable legislation along with spotlight statistics on chronic pain

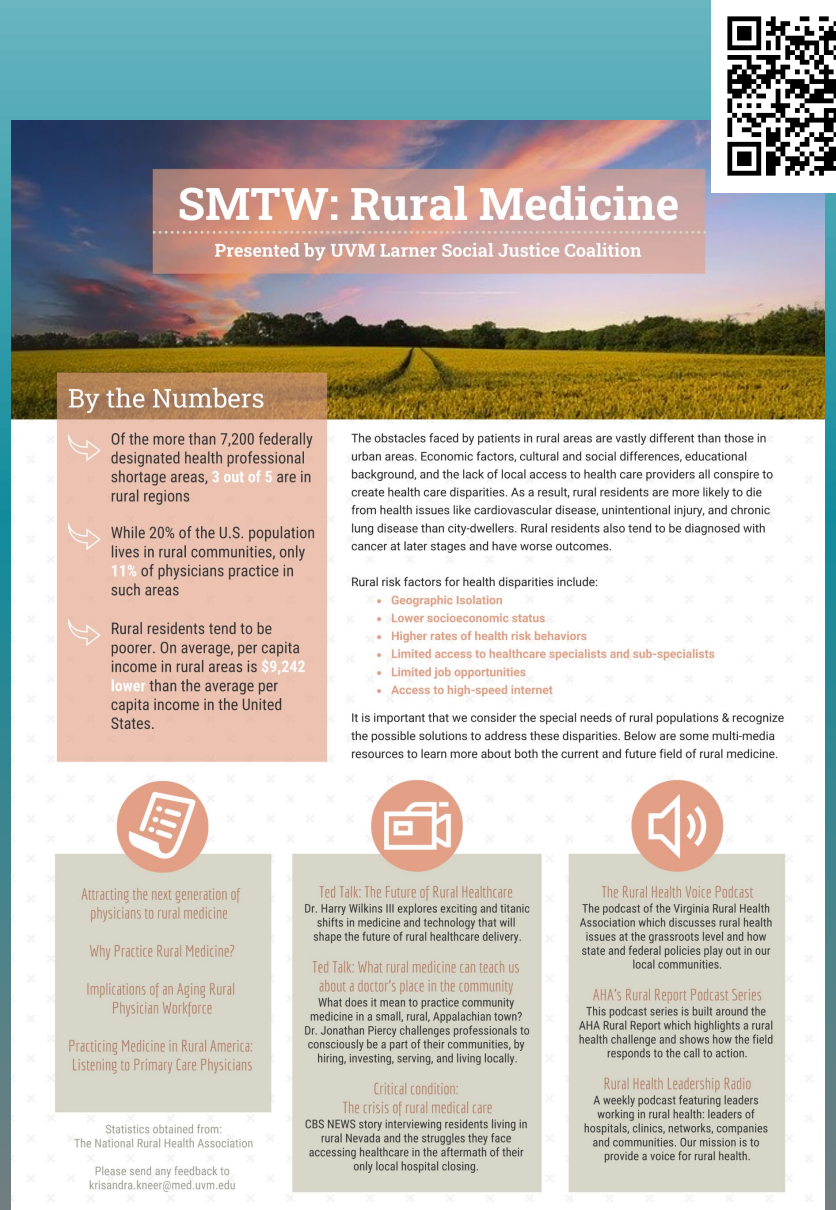


Figure 3: SMTW Rural Medicine Newsletter with statistics highlighting the shortage of health professionals in rural regions and the specific risk factors that contribute to disparities among individuals living in rural settings.

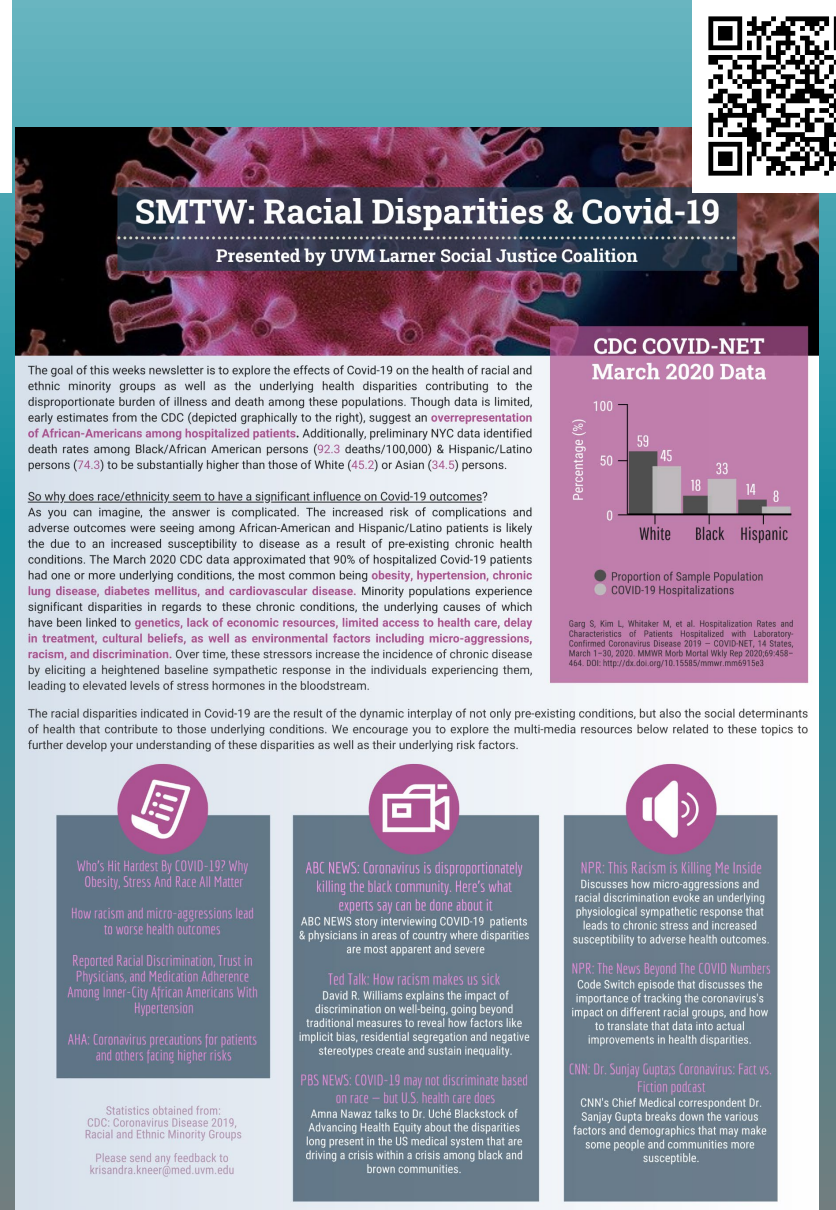


Figure 4: SMTW Racial Disparities & Covid-19 Newsletter with statistics highlighting the disparities seen in Covid-19, with data demonstrating the disproportional impact of adverse outcomes across minority populations.

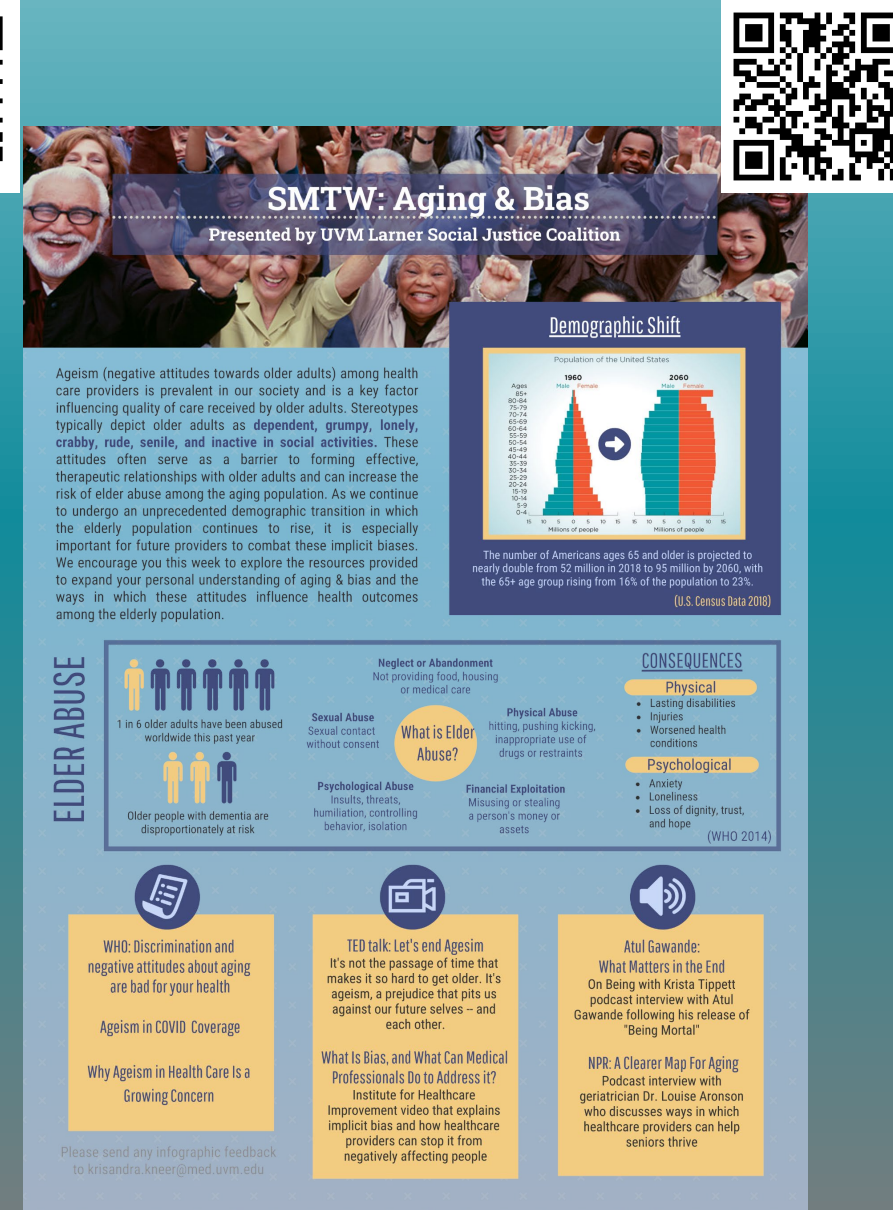


Figure 5: SMTW Aging & Bias Newsletter outlining the common stereotypes of older adults and the ways in which underlying bias contributes to elder abuse among the aging population.

Discussion

The use of infographics in higher education settings is becoming more and more prevalent as a tool to convey complex information in a manner that is both eye-catching and easily understood. A recent study assessing the effectiveness of this delivery method found infographics to be associated with higher reader preference and lower cognitive load.² This format also allows for rapid dissemination of information to the entire LCOM community. For example, when several evidence-based resources revealed racial disparities in medicine related to Covid-19, we created and quickly disseminated an infographic of this evidence to both the students and faculty. Though we have not yet had the opportunity to evaluate our approach, the findings of other groups suggest that students will be more inclined to engage with the Social Medicine Theme of the week in a meaningful way when presented information in this manner. It is our goal that through this method of delivery, students will become better equipped to draw connections between social medicine topics and their coursework as well as inspired to address the social changes necessary to achieve health equity for all.

Future Directions

- Continue generating infographics until there is one to complement every Social Medicine Theme of the Week for the entire pre-clinical medical curriculum at UVM Larner
- Increase visibility of infographic resources to both students and faculty through collaboration with other UVM Larner resources such as the Library website and UVM Larner College of Medicine and Blog
- Continue to expand this intervention with each entering Larner College of Medicine class with the goal of increasing student dialogue on the topics of social medicine and possibly expanding to Global Health topics
- Formal evaluation of student feedback on the utilization of infographics to introduce Social Medicine topics to determine effectiveness and worth of this intervention

References:

1. Goyal, R., Dawson, C., Epstein, S., et al. The Design and Implementation of a Longitudinal Social Medicine Curriculum at the University of Vermont's Larner College of Medicine. *Submitted for Publication, 2020.*
2. Martin, L., Turnquist, A., Groot, B., et al. Exploring the Role of Infographics for Summarizing Medical Literature. *Health Professions Education.* 2019;5(1):48-57. <https://doi.org/10.1016/j.hpe.2018.03.005>.