

# MedEdPORTAL: A Report on Oral Health Resources for Health Professions Educators

**Nithya S. Chickmagalur, B.D.S., M.D.S., D.M.D.; Veerasathpurush Allareddy, B.D.S., Ph.D.; Sue Sandmeyer; Richard W. Valachovic, D.M.D., M.P.H.; Christopher S. Candler, M.D., Ed.D.; Michael Saleh; Emily Cahill, M.P.H.; Nadeem Y. Karimbux, D.M.D., M.M.Sc.**

*Abstract:* MedEdPORTAL is a unique web-based peer-reviewed publication venue for clinical health educators sponsored by the Association of American Medical Colleges (AAMC). The open exchange of educational resources promotes professional collaboration across health professions. In 2008, the American Dental Education Association (ADEA) collaborated with AAMC to allow dental educators to use the platform to publish dental curriculum resources. Oral health is integral to general health; hence, collaboration among health care professionals brings enormous value to patient-centered care. The aim of this study was to conduct a current survey of metrics and submission statistics of MedEdPORTAL resources. The data were collected using the MedEdPORTAL search engine and ADEA and AAMC staff. The data collected were categorized and reported in tables and charts. Results showed that at the time of this study there were over 2,000 medical and dental resources available to anyone worldwide. Oral health resources constituted approximately 30 percent of the total resources, which included cross-indexing with information relevant to both medical and dental audiences. There were several types of dental resources available; the most common were the ones focusing on critical thinking. The usage of MedEdPORTAL has been growing, with participation from over 190 countries and 10,000 educational institutions around the world. The findings of this report suggest that MedEdPORTAL is succeeding in its aim to foster global collaborative education, professional education, and educational scholarship. As such, MedEdPORTAL is providing a new forum for collaboration and opens venues for promising future work in professional education.

Dr. Chickmagalur graduated with a D.M.D. in the Class of 2012, Harvard School of Dental Medicine and is currently pursuing an Orthodontic residency and an M.M.Sc. in Oral Biology at Harvard School of Dental Medicine; Dr. Allareddy was Director of Predoctoral Orthodontics, Harvard School of Dental Medicine at the time of this study; Ms. Sandmeyer was Assistant Vice President for Knowledge Management, American Dental Education Association at the time of this study; Dr. Valachovic is President and CEO, American Dental Education Association; Dr. Candler is Editor-in-Chief, MedEdPORTAL, Association of American Medical Colleges; Mr. Saleh was Senior Manager, MedEdPORTAL at the time of this study; Ms. Cahill is Managing Editor, AAMC; and Dr. Karimbux is Professor and Associate Dean for Academic Affairs, School of Dental Medicine, Tufts University. Direct correspondence and requests for reprints to Dr. Nithya S. Chickmagalur, Harvard School of Dental Medicine, 188 Longwood Ave., Boston, MA 02115; Nithya\_Chickmagalur@hsdm.harvard.edu.

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Education and its evolving concepts have laid a firm foundation for the steady growth of every field in health care. Currently, there is burgeoning interest in two areas of health education: interprofessional education<sup>1,2</sup> and scholarly activity.<sup>3</sup> For example, recent evidence has linked inflammation to several chronic diseases of aging.<sup>4</sup> In the area of oral health, periodontal inflammation has been linked to systemic diseases such as diabetes<sup>5</sup> and cardiovascular health.<sup>6</sup> This new information and these new links require all health care professionals to share information across many different spectrums.

Scholarship in education, as articulated by Boyer,<sup>7</sup> is a demonstration of academic excellence in the areas of discovery, teaching and learning, application,

and integration. Across the globe, committed faculties have dedicated quality time to further the subject of science and contribute to scholarly activity for achieving excellence in teaching and research. Many times these activities are not converted into publications in traditional peer-reviewed print journals and therefore are not considered to be “scholarly” work for the purposes of promotion and tenure. These contributions are, however, invaluable educational resources and may be in different forms like tutorials, virtual patients, simulation cases, laboratory manuals, clinical handbooks, and assessment tools.

The huge task of assimilating this fully integrated content of global scholarly activity into an organized online resource led to the conception of

MedEdPORTAL by the Association of American Medical Colleges (AAMC) in 2004. MedEdPORTAL provides an opportunity for faculty members to convert their existing educational content into scholarly work. This includes faculty members reflecting on the background and significance of their work in a larger context; making the work generalizable; reflecting on the strengths and weaknesses of the work; and providing instructor guidelines to other faculty members for dissemination of the work. Once submitted, the work is peer-reviewed and, if accepted, is published on the MedEdPORTAL website for use by others. Many schools now consider such peer-reviewed, published curriculum resources as scholarly publications when making decisions about promotion and tenure.<sup>8,9</sup>

In 2008, the American Dental Education Association (ADEA) partnered with AAMC to support the submission of dental curriculum resources. The steady growth of MedEdPORTAL in the past years and the need for a recent documentation to review the current work and promote global educational collaboration initiated this study. The purpose of this article is to provide an in-depth report on the available resources and submission statistics of MedEdPORTAL and to analyze MedEdPORTAL as a venue for professional education. This study was specifically conducted to report on 1) the type and number of oral health materials and medical materials available in MedEdPORTAL; 2) submission decisions on the peer review process (including number of accepted/rejected materials); and 3) metrics available to the publisher (including MedEdPORTAL usage statistics).

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## Methods and Data Collection

A multimethod approach was used to collect the data. This process involved collection of data from the MedEdPORTAL<sup>10</sup> search engine, metrics made available by the publisher, and submission statistics of the peer review process from the editors. A comprehensive search of all the resources available on MedEdPORTAL was conducted using the search option. While searching for resources, we changed all filter options accordingly to reveal total number of medical and dental resources available at the time of the study (February 2012). Once the medical and dental resources were identified, each category was explored, and a comprehensive list of resources

within each category and subcategory was made. In addition, data on the peer review process and metrics on the accepted/rejected submissions were collected directly from the publisher and editors. This information was then used to create a detailed descriptive report of MedEdPORTAL.

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## Results

MedEdPORTAL features over 2,000 educational resources broadly categorized under two areas of the health professions: medical and dental. Each discipline has further categories and subcategories of resources. A total number of 2,069 publications were available during the time period of this study. The medical specialties and number of resources in each specialty are shown in Figure 1. Among the medical specialties, the highest number of submissions was from internal medicine. Family medicine resources were second highest, and the least number of resources were from neurosurgery. Numbers of resources in the dental areas are shown in Figure 2. There were a total of fifty-three subcategories in the dental discipline. Among the various oral health/dental resources, the highest submissions were in physiology followed by biochemistry/cell biology.

Resources relevant to the oral health community constituted about 30 percent of the total publications. To meet the needs of a cross-section of users, these resources were also categorized based on competencies assessed, intended audience, instructional methodology, resource type or format, and academic focus. Publications that assessed competencies were categorized under these headings: preclinical/clinical skills, lifelong learning, practice management and informatics, interpersonal and communication skills, professionalism, health promotion, critical thinking, and patient care (Figure 3). Among these, the highest number of submissions assessed critical thinking ability followed by assessment of preclinical/clinical skills. Practice management and informatics constituted the least number of submissions. Figure 4 shows the number of oral health resources categorized by intended audience. Resources for professional school constituted the highest number of resources, while resources for patients constituted the smallest number of submissions in this category.

Figure 5 shows the distribution of available oral health resources based on instructional methodology. Institutions across the globe vary in mode of instruction, and this diversity is shown in MedEdPORTAL publications. The highest number

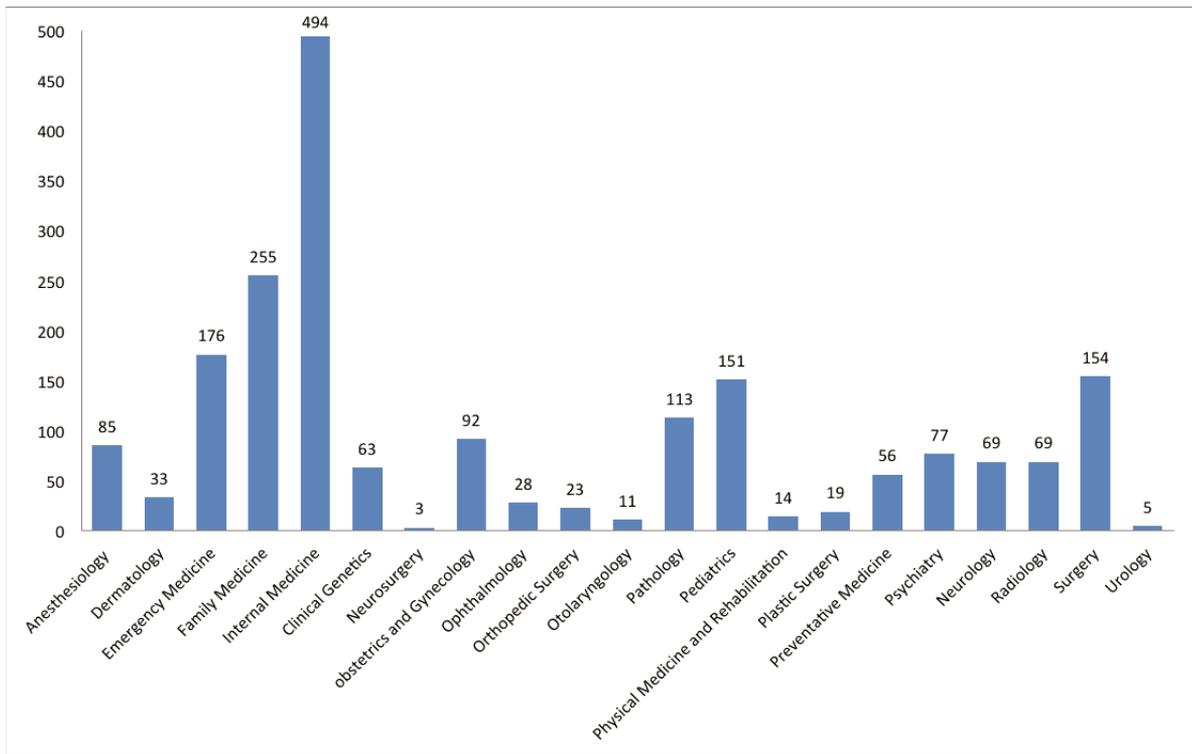


Figure 1. Number of available resources in each medical discipline in MedEdPORTAL

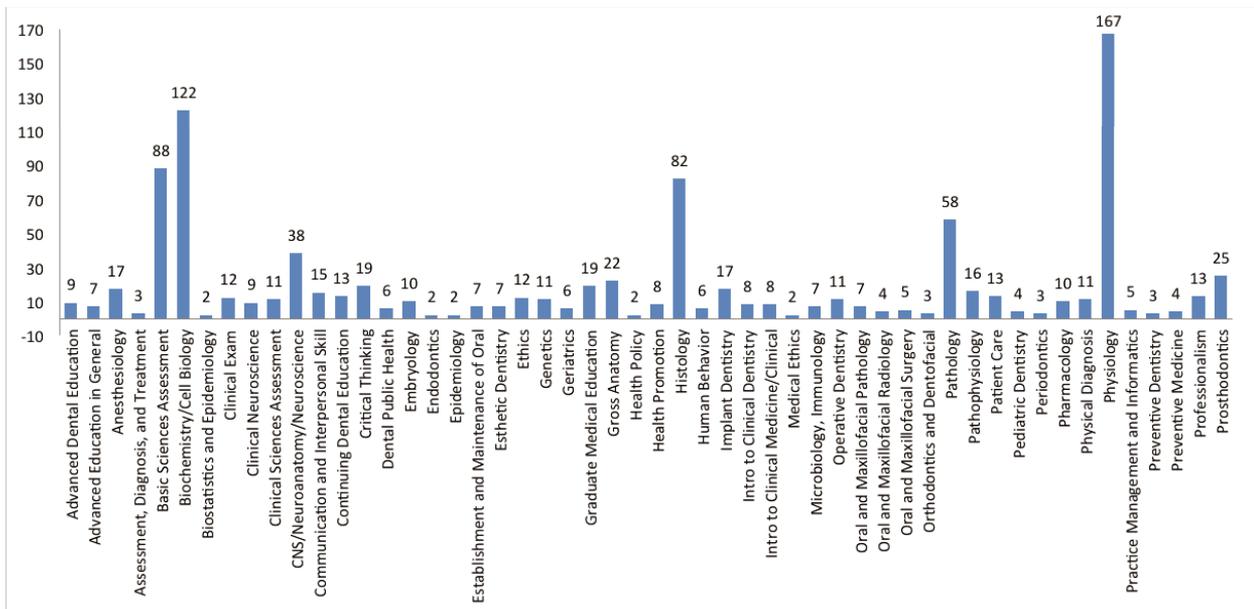


Figure 2. Number of available resources in each dental category in MedEdPORTAL

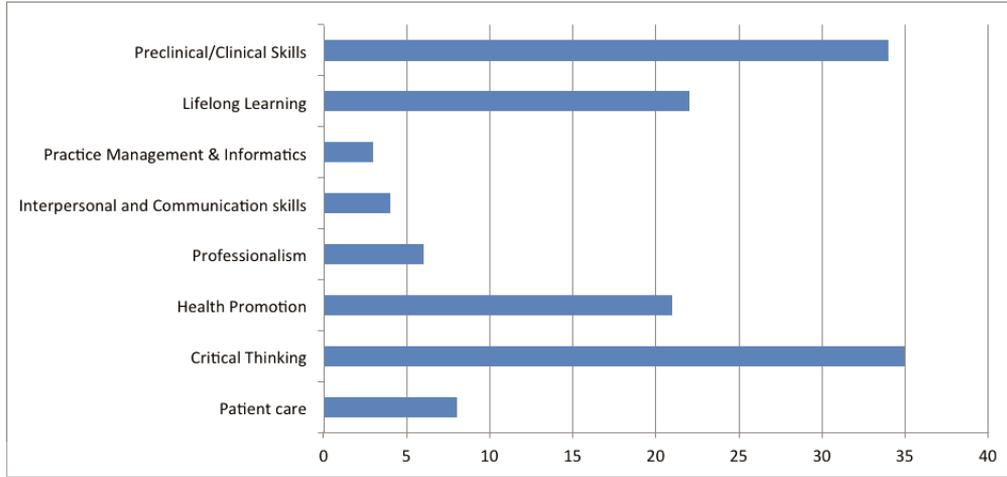


Figure 3. Distribution of oral health resources in MedEdPORTAL categorized by competencies assessed

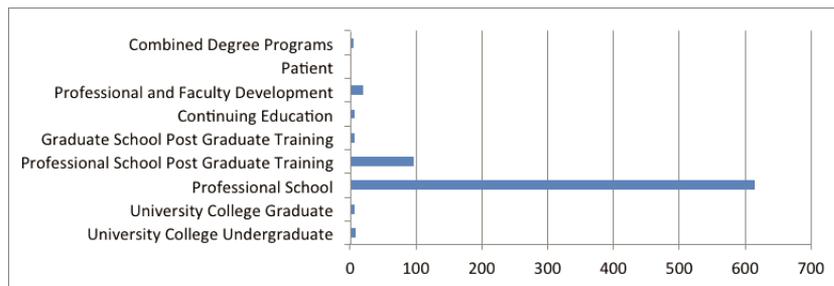


Figure 4. Distribution of oral health resources in MedEdPORTAL by intended audience

of submissions was in the category of independent study resources. Three other popular modes of instruction were lectures, problem-based learning, and simulations. MedEdPORTAL publications are unique as they constitute a wide variety of formats. Figure 6 shows the number of resource by type of format: video, tutorial, reference, presentation, multimedia, lab guide, image, evaluation tool, curriculum, case, audio, and animation. Images and animations constituted the highest and second highest number of submissions in this category. Figure 7 shows the distribution of oral health resources based on academic focus: basic science resources and clinical science resources.

MedEdPORTAL currently includes more than 800 active peer reviewers across a variety of disciplines. Figure 8 shows acceptance/rejection statistics for submissions in December 2010 and December 2011. In December 2010, 16 percent of total submissions were accepted without revisions, 54 percent required revisions, and 30 percent were rejected. In December 2011, peer review statistics showed that 18 percent of submissions were accepted without revisions, 53 percent were accepted with revisions, and 29 percent were rejected. MedEdPORTAL is being used by over 190 countries across the globe. The United States, Canada, the United Kingdom, India, and Australia were the top countries downloading from MedEdPORTAL during the study period.

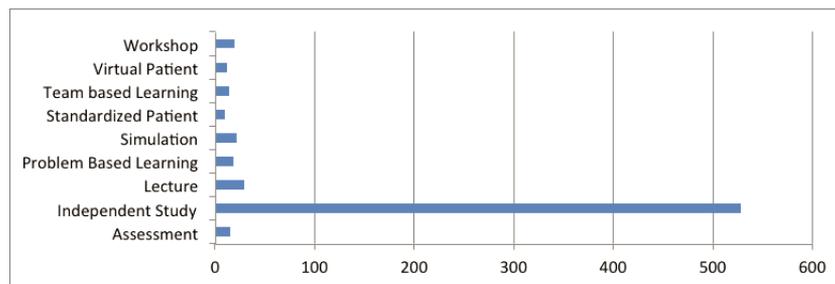


Figure 5. Distribution of oral health resources in MedEdPORTAL by instructional methodology

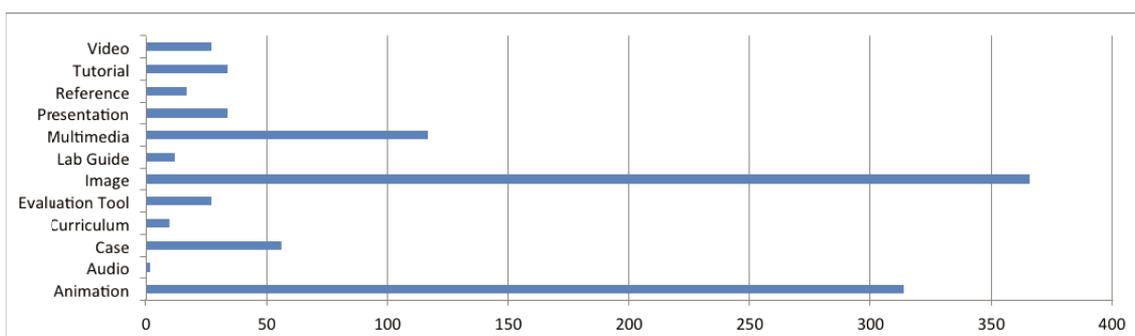


Figure 6. Distribution of oral health resources in MedEdPORTAL by format

## Discussion

This report shows the comprehensive categorization of professional resources and recent submission statistics of the peer review process in MedEdPORTAL. MedEdPORTAL publications are an integration of medical and dental resources. Past studies have emphasized the need for interdisciplinary programs and interprofessional education.<sup>11-14</sup> A national survey concluded that very little oral health education was offered in the majority of U.S. medical schools that participated in the study.<sup>15</sup> Another study concluded that there is a vital need for collaboration between medical and dental professionals to jointly educate and treat diabetic patients who are at risk for developing periodontal disease.<sup>16</sup> The ultimate

goal of interprofessional education is to promote a collaborative environment and improve the overall quality of patient care.

Teaching and learning methodologies have been advancing with time, and educators have adopted various methods of teaching. In addition, professional schools are now developing educational material compatible with personal computing systems. This has made education more interactive and accessible. MedEdPORTAL aims to serve as a platform for these unique and interesting educational resources. MedEdPORTAL resources include tutorials, simulation scenarios, virtual patients, desktop applications, exercises, cases, laboratory manuals, assessment instruments, lecture presentations, faculty development materials, problem-based learning materials, and videos.

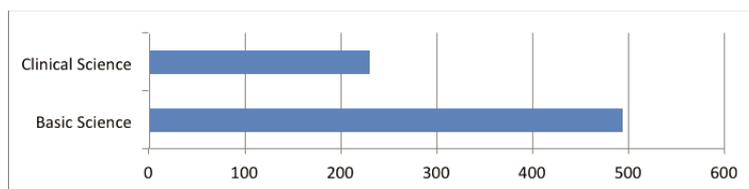


Figure 7. Distribution of oral health resources in MedEdPORTAL by general academic focus

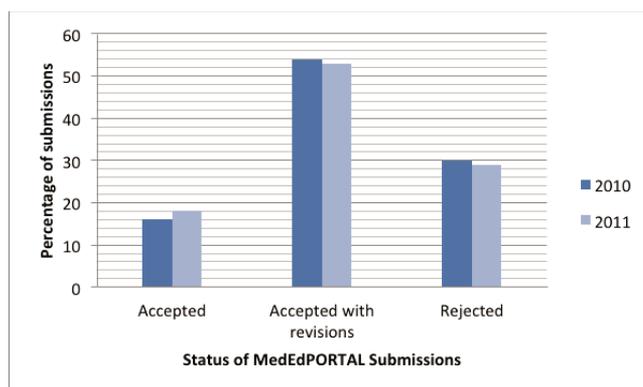


Figure 8. Acceptance/rejection statistics for MedEdPORTAL in 2010 and 2011

Students and educators across the globe have access to MedEdPORTAL and its resources. Currently, MedEdPORTAL is being used by more than 10,000 health education institutions from over 190 countries. In a snapshot of analytics between June and October 2011, over 400 registered users identified with the dental health profession. These users represented 153 institutions from twenty-nine countries worldwide. During this timeframe, resources from the oral health collection were downloaded over 1,000 times per month—constituting nearly one-fourth of total site usage. Moreover, 660 registered users identified with the medical profession also downloaded content from the oral health collection.

With the large numbers of submissions and of users documented here, this report shows that MedEdPORTAL is promoting scholarly work and educational scholarship, as called for in articles on the importance of scholarship in the health professions.<sup>17-19</sup> This type of educational work and portfolio-like documents can benefit scholars by providing them with a means of recognition of their

scholarly work. A few medical schools have broadened the meaning of scholarship and have come up with changes in their academic reward systems.<sup>20</sup> In 1998, a descriptive qualitative research study showed how the academic culture at Harvard Medical School shifted from promotion based solely on original scholarship to promotion based on a wide array of educational contributions.

MedEdPORTAL promotes and accepts submissions from students and teachers at all levels of their education and career. This aspect encourages authors to develop unique and innovative materials for use in teaching and for publication. For example, a simulation video with stepwise instructions to completing a tooth wax-up created by a student will greatly help his peers as well as other students. Although MedEdPORTAL publications are unique, the publication process is similar to scientific journals in that it has a peer review board and a rigorous peer review process. The publication statistics overall for December 2011 showed that 18 percent of submissions were accepted without revisions, 53 percent

of submissions required revisions prior to publication, and 29 percent of submissions were rejected. A previous article on MedEdPORTAL for December 2007 reported that 45 percent of submissions were accepted, 29 percent were accepted with revisions, and 26 percent were rejected.<sup>21</sup>

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## Conclusion

MedEdPORTAL is a unique web-based, peer-reviewed publication venue for health professionals and students. MedEdPORTAL publications reflect scholarly activity and serve as a collaborative educational hub providing a range of medical and dental education resources to faculty and students around the globe. The data from this study show that MedEdPORTAL is a potential resource for global collaboration in education, interprofessional education, and educational scholarship. Oral health is integral to general health, and collaboration among health professionals in practice enhances patient-centered care. MedEdPORTAL provides a new forum for the sharing of resources that can support interprofessional education in the health care professions.

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