

### Learning Objectives

- To determine characteristics of Interprofessional Education (IPE) related to dentistry and oral health.
- To establish existing parameters of IPE in dentistry.
- To develop a model for an ideal standardized assessment of IPE programs.
- To develop a feasible pathway for domains development for the growth of IPE.

### Background

Interprofessional education occurs when students from two or more professions join together in order to learn and collaborate with one another.<sup>1</sup> In the context of health professionals, this is often to address unmet health needs. Pediatric oral health is one such example. Traditionally, pediatric oral health has been solely the focus of dental professionals with an emphasis on surgical dental care instead of preventive care in addressing early childhood caries (ECC).<sup>2</sup> However, pediatric oral health is not solely a dental concern but rather an element of overall health and well-being. As such, it must be addressed by additional health professionals such as pediatricians and nurses.

There has been a recent shift toward preventive services in addressing ECC.<sup>3,4</sup> Pediatric providers are in a unique position to deliver preventive dental care during well child checks, though often lack the knowledge and education to do so.<sup>5,6</sup> IPE programs can fill this gap and offer further professional development based on *Core Competencies for Interprofessional Collaborative Practice* from the Interprofessional Education Collaborative (IPEC).<sup>7</sup> One example of such a program is the Strategic Partnership for Interprofessional Collaborative Education in Pediatric Dentistry (SPICE-PD), the interprofessional training program for UCLA's pediatric dentistry program.<sup>8</sup>

As a part of dental education, there are numerous IPE programs that include dental students, dental hygiene students, and dental residents alongside other health professionals. Although these programs exist, not all programs undergo a process of evaluation to assess the benefits for participants. The aim of this study is to examine current methods of evaluation among existing IPE programs in order to improve the IPE component of pediatric dentistry curricula.

### Methods

#### Inclusion Criteria

- Must satisfy World Health Organization's definition of IPE
- Must include students and/or professionals in the field of dentistry in IPE program
- Must have some form of evaluation in IPE program

1236 articles were identified from Pubmed search of "interprofessional education dentistry"

Titles were reviewed for keyword "interprofessional." 1152 articles excluded.

84 articles remained after exclusions

Abstracts reviewed to examine if article met inclusion criteria.

40 articles remained after exclusions that were included in the present study

### Results

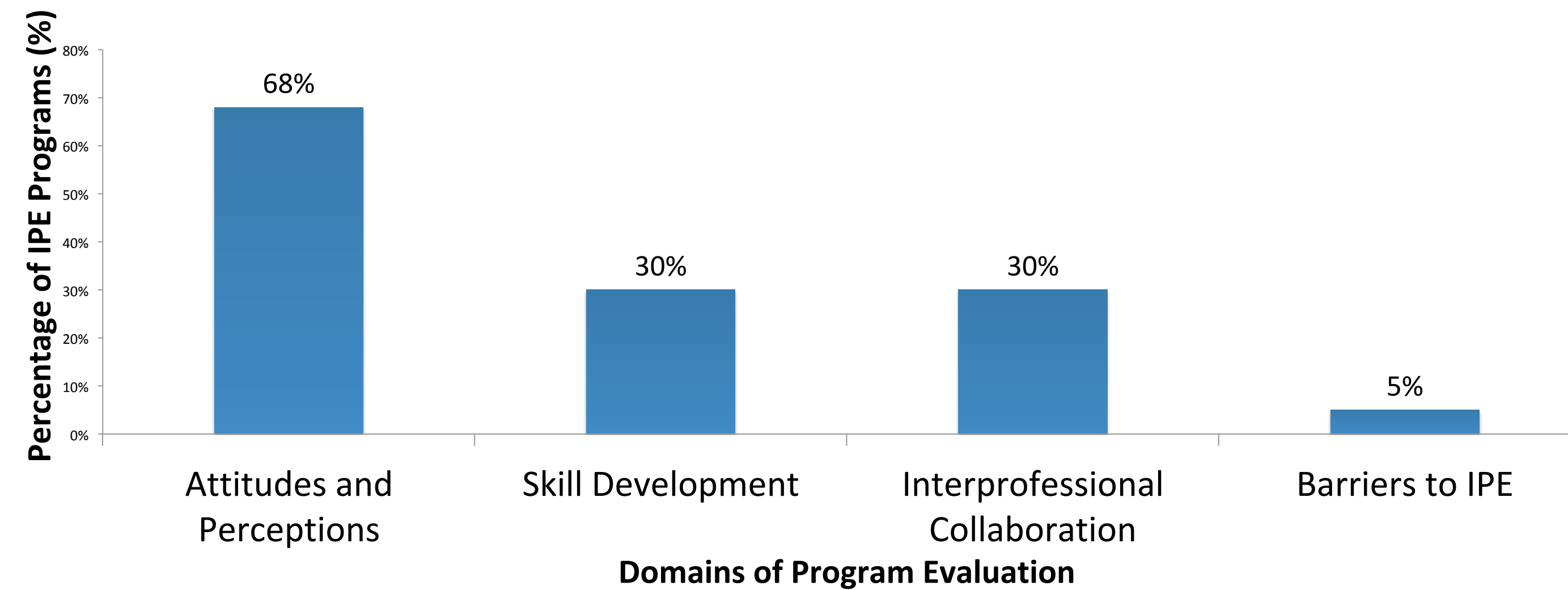


Figure 1: Percentage of IPE programs that utilize methods of self-evaluation

Domain of Program Evaluation	Method of Evaluation (Number of Programs)
Barriers to IPE	Identifying challenges to program (2)
Attitudes and Perceptions	Readiness for Interprofessional Learning Scale (12) Non-standardized surveys (9) Interviews (3) Students Perception of Interprofessional Clinical Education (2) Interprofessional Questionnaire (1) Reflective reports (1)
Skill Development	Assessment of knowledge (9) Assessment of diagnostic abilities (3)
Interprofessional Collaboration	Interprofessional Collaborative Competencies Attainment Survey(3) TeamSTEPPS Teamwork Attitude Questionnaire (2) Alumni interviews and surveys (1) Interdisciplinary Education Perception Scale (1) Interprofessional Education Collaborative Self-Assessment (1) Knowledge of IPE Core Competencies Instrument (1) Points for interprofessional Score (1) Self-efficacy in functioning as a team member of an interdisciplinary team (1) Student Stereotyping Rating Questionnaire (1) Team-Based Treatment Planning Scale (1) UCLA Geriatric Attitudes Scale (1)

Table 1: Breakdown of method of evaluation by domain of program.

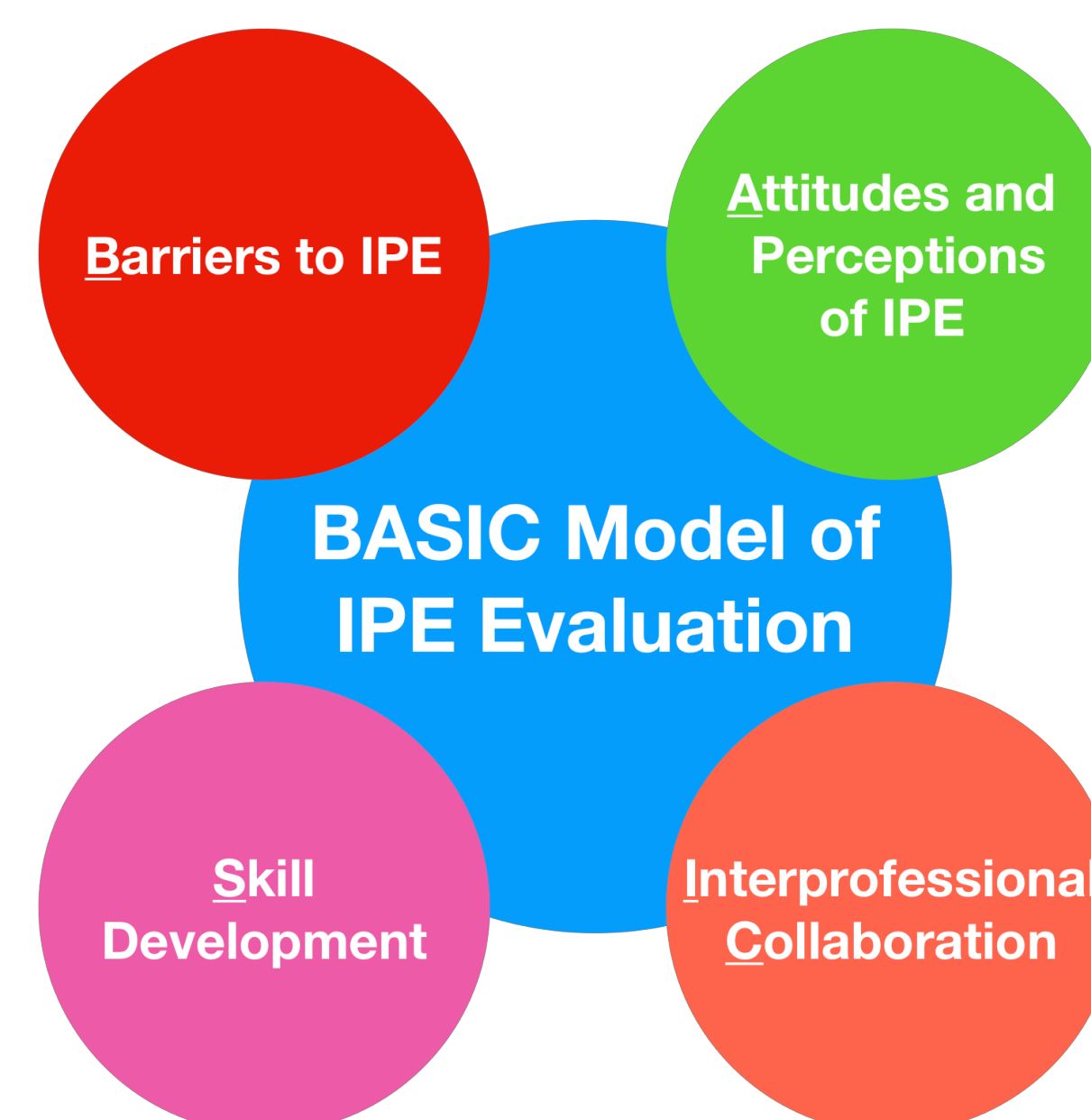


Figure 2: BASIC Model of IPE Evaluation .

Agreement of MDs, PNP's, and general dental residents (AEGDs/GPRs) with the following statements:			
Statement	Strongly Agree or Agree	Neutral	Strongly Disagree or Disagree
SPICE-PD program has prepared me well to address the oral health needs of special needs & vulnerable populations.	76.26%	20.14%	3.60%
SPICE-PD faculty provided important perspectives on oral health that I did not receive elsewhere in my graduate education.	79.86%	14.39%	5.76%
My experience in SPICE-PD has positively influenced my professional practice as regards oral health.	87.05%	10.07%	2.88%

Table 2: This is one example of IPE self-evaluation from the UCLA SPICE-PD program, specifically focusing on attitudes and perception. <sup>8</sup>

### Discussion

In order to address pediatric oral health needs as a part of overall health, interprofessional collaboration is needed. This collaboration begins during IPE and therefore it is essential to understand elements of effective IPE programs through objective measures. Based on the review of literature, **four primary domains** of program evaluation were identified: (1) Barriers to IPE, (2) Attitudes and Perceptions, (3) Skill Development, and (4) Interprofessional Collaboration. As such, these four domains have been incorporated into the BASIC Model of IPE Evaluation.

#### 1. Barriers to IPE

Few programs identify barriers to IPE. Incorporating quality improvement (QI) measures in a Plan-Do-Study-Act (PDSA) based on previous barriers can allow programs to overcome encountered challenges.

#### 2. Attitudes and Perceptions

Within the scope of IPE programs, it is important to examine how participants perceive the value of IPE. Based on this study's findings, attitudes and perceptions towards IPE are most commonly assessed. One objective measure commonly used among IPE programs evaluated in this study was the Readiness for Interprofessional Learning Scale (RIPLS) that examines attitudes towards interprofessional learning.<sup>9</sup>

#### 3. Skill Development

Assessing skill development in IPE programs is often program-specific based on unique objectives. Existing literature focuses largely on assessing knowledge gained from IPE programs.

#### 4. Interprofessional Collaboration

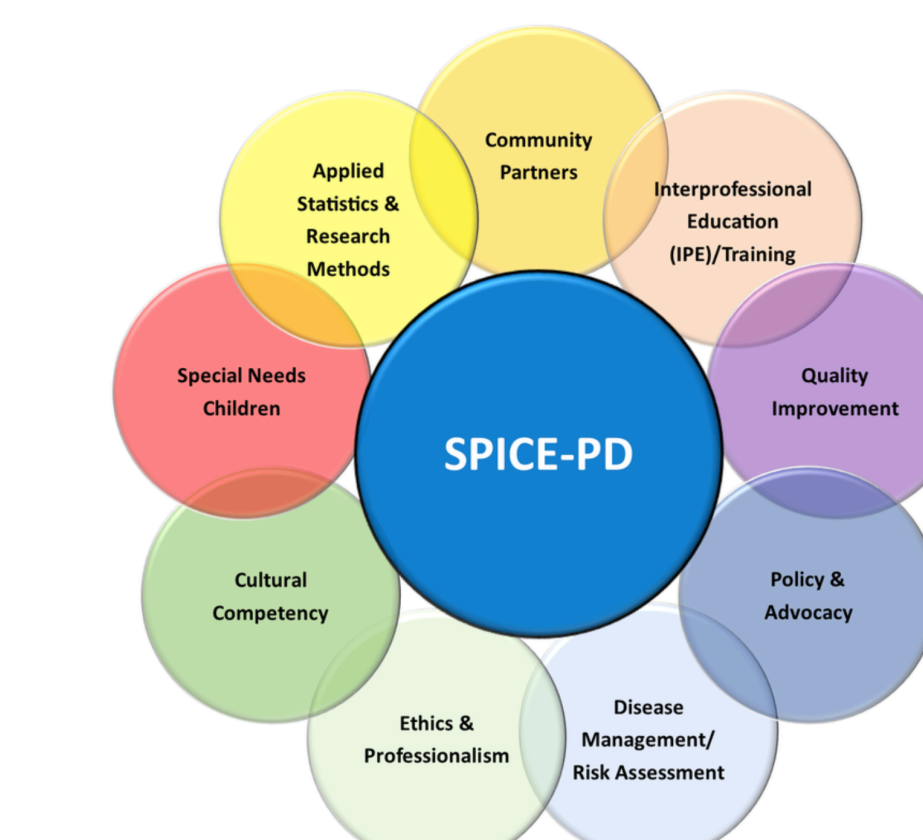
The Core Competencies for Interprofessional Collaborative Practice from the IPEC outlines competency domains including value and ethics for interprofessional practice, roles and responsibilities, interprofessional communication, and teams and teamwork. Assessing this facet of IPE is highly variable in literature, though the Interprofessional Collaborative Competencies Attainment Survey (ICCAS) is one instrument that has been utilized to assess these domains.<sup>10</sup>

### Conclusion

The evaluation of IPE programs, both new and existing, is essential in order to improve the quality and effectiveness of IPE in pediatric dentistry curricula. In order to evaluate IPE programs, the four domains of program evaluation identified in this study should be assessed.

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