



School of Dentistry Dental Hygiene Program Interprofessional Education Plan Academic Year 2023-2024

Background

UT Health San Antonio's Strategic Plan for fiscal years 2023-2027 continues to emphasize Teamwork & Collaboration as a core value. The Quality Enhancement Plan (QEP), Linking Interprofessional Networks for Collaboration (LINC), is an institution-wide effort to advance our Strategic Plan by enhancing interprofessional education (IPE) at UT Health San Antonio. Key measures of success include increasing student knowledge and skills related to IPE, demonstrating schools' and programs' adoption of IPE as a strategic priority through increased activities integrated into programs' curricula, and increasing opportunities for student IPE experiences across the institution. To contribute to the coordinated implementation of the QEP and to demonstrate compliance with program-specific IPE accreditation standards, the School of Dentistry's (SOD) Associate Dean for Academic, Faculty and Student Affairs led the development and implementation of the Dental Hygiene (DH) IPE Plan with contributions from an IPE Task Force made up of members drawn from SOD.

Profession-Specific Accreditation Mandate

The Commission on Dental Accreditation requires the integration of IPE into the Dental Hygiene program curricula, as evidenced by the following standards/expectations:

DENTAL HYGIENE PROGRAM

There is one standard that addresses IPE.

- **CODA Standard 2-15**, on patient care competencies, states that graduates must be competent in communicating and collaborating with other members of the health care team to support comprehensive patient care. The intent of the standard states that student must have the ability to communicate verbally and in written form is basic to the safe and effective provision of oral health services for diverse populations. Dental Hygienists should recognize the cultural influences impacting the delivery of health services to individuals and communities (i.e. health status, health services and health beliefs). Students should understand the roles of members of the health-care team and have educational experiences that involve working with other health-care professional students and practitioners.

School of Dentistry Dental Hygiene IPE Plan

In accordance with HPAC recommendations, this IPE plan consists of four components: rationale, outcome-based goals, deliberate design, and assessment and evaluation. Details for each component are included below:

Rationale:

In an era of accountability our healthcare system and the public are demanding efficiencies for cost-effectiveness, quality improvement and coordinated care. To meet these demands interprofessional collaborations are a must. Therefore, The University's vision is to "transform health and healthcare for a diverse society"¹ by identifying a teamwork and collaboration plan that meets its core values. The institution's Quality Enhancement Plan (QEP), Linking Interprofessional Networks for Collaboration

(LINC), seeks to increase faculty, staff, and student knowledge and skills related to IPE, demonstrate schools' and programs' adoption of IPE as a strategic priority through increased activities integrated into programs' curricula, and increase opportunities for student IPE experiences across the institution.

Justification for formalizing the DH program's approach through this IPE Plan is drawn from the Commission on Dental Accreditation requirement to integrate IPE into the our curriculum, as evidenced by standards and expectations that mandate graduates are "competent in communication and collaborating with other members of the healthcare team to support comprehensive care."² As such, our approach relies on evidence from the Institute of Medicine that examines the need to measure the impact of IPE on collaborative practice and health system outcomes. Moreover, evidence suggests that a shared team identity helps to solve problems and improve delivery of care.³

The IPEC core competency framework aligns with CODA Standard 2-15. The first competency domain is values/ethics for interprofessional practice, where individuals of other professions maintain a climate of mutual respect and shared values. Next, is the roles/responsibilities domain where the use of knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations. This is followed by interprofessional communication, where students learn to communicate with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease. The final competency domain is teams and teamwork. This element applies relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable.

Evidence to comply with CODA Dental Hygiene standard 2-15 are supported by use of reliable and validated IPE outcome tools found in the Kirkpatrick Learning Outcomes listed in the IOM Interprofessional Learning Continuum Model – Reactions, Attitudes/Perceptions, Knowledge/Skills, Collaborative Behavior, and Performance in Practice.

Our collective interpretation of the IPE standards has led us to an agreed strategy where opportunities for IPE within the University were explored. The list below captures didactic, clinical, and co-curricular IPE activities where a unified effort has the potential to meet the mission and vision of the University and the DH program.

Dental Hygiene Rationale References:

1) UT Health San Antonio: Strategic Plan Fiscal Year 2018-2022, page 2. obtained from: https://issuu.com/hscsa_communications/docs/strategicplan_2018-22_final-filpboo

2) Commission on Dental Accreditation, Dental Hygiene Program: Standard 2-15. Patient Care Competencies. Page 28. Obtained from https://www.ada.org/~media/CODA/Files/2020_dental_hygiene_standards.pdf

3) Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes Committee on Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes; Board on Global Health; Institute of Medicine. Washington (DC): National Academies Press (US); 2015 Dec 15. <https://www.ncbi.nlm.nih.gov/books/NBK338360/>

Outcome-based Goals:

As an institution, we have chosen IPEC as our shared framework, and the most relevant IPE sub-competencies serve as the overarching outcome-based goals of the Dental Hygiene program. The IPEC sub-competencies selected are in alignment with the University’s and SOD’s vision for IPE and serve as tangible goals to design our approach. The IPEC sub-competencies for the dental hygiene program are listed in the table below. The constructs of learner outcomes are based on the Kirkpatrick Learning Outcomes listed in the IOM Interprofessional Learning Continuum Model – Reactions, Attitudes/Perceptions, Knowledge/Skills, Collaborative Behavior and Performance in Practice.

Table 1. Dental Hygiene Program IPE Plan – Goals Identified through Crosswalk of Interprofessional Practice-Relevant Competency Frameworks

IPE Experience/ Program Objectives	IPEC Domains	IPEC Sub-Competencies Targeted
<p>Health Literacy OSCE</p> <p>Improving the experience of health care and integrating oral to overall health</p> <p>Addressing cultural humility and social determinants of health as an interprofessional collaborative addressing population health outcome with emphasis on inclusion and equity training</p>	<p>Communication</p> <p>Teams and Teamwork</p>	<p>C3. Communicate clearly with authenticity and cultural humility, avoiding discipline-specific terminology.</p> <p>C4. Promote common understanding of shared goals.</p> <p>C6. Use constructive feedback to connect, align, and accomplish team goals.</p> <p>TT6. Reflect on self and team performance to inform and improve team effectiveness.</p>
<p>LINC Common IPE Experience</p> <p>Demonstrate communication skills and collaboration with other members of the health care team to facilitate the provision of health care.</p>	<p>Teams and Teamwork</p> <p>Communication</p>	<p>C5. Practice active listening that encourages ideas and opinions of other team members.</p> <p>C7. Examine one’s position, power, hierarchical role, unique experience, expertise, and culture towards improving communication and managing conflicts.</p> <p>TT1. Describe evidence-informed processes of team development and practices.</p> <p>TT3. Practice team reasoning, problem-solving, and decision-making.</p> <p>TT6. Reflect on self and team</p>

		performance to inform and improve team effectiveness.
<p>LINC Simulation IPE Experience</p> <p>Apply interprofessional subcompetencies of interprofessional communication and teamwork in a university simulation</p> <p>Practice communicating with a standardized patient caregiver in a difficult situation, crucial conversation, or conflict</p> <p>Develop and validate an observational assessment tool measuring knowledge and skill acquisition in an IPE simulation activity</p>	<p>Teams and Teamwork</p> <p>Communication</p>	<p>C2. Use communication tools, techniques, and technologies to enhance team function, well-being, and health outcomes.</p> <p>C3. Communicate clearly with authenticity and cultural humility, avoiding discipline-specific terminology.</p> <p>C7. Examine one’s position, power, role, unique experience, expertise, and culture towards improving communication and managing conflicts.</p> <p>TT2. Appreciate team members’ diverse experiences, expertise, cultures, positions, power, and roles towards improving team function.</p> <p>TT3. Practice team reasoning, problem-solving, and decision-making.</p> <p>TT5. Apply interprofessional conflict management methods, including identifying conflict cause and addressing divergent perspectives.</p>
<p>LINC Clinical IPE Experience</p> <p>List the different factors that contributed to the adverse patient event in the graphic case</p> <p>Organize the factors into different categories using principles of systems thinking (e.g., fishbone diagram)</p> <p>Analyze an authentic clinical learning environment during individual clinical placements</p>	<p>Communication</p> <p>Team and Teamwork</p> <p>Roles and Responsibilities</p>	<p>RR3. Incorporate complementary expertise to meet health needs including the determinants of health.</p> <p>C2. Use communication tools, techniques, and technologies to enhance team function, well-being, and health outcomes.</p> <p>C7. Examine one’s position, power, role, unique experience, expertise, and culture towards improving communication and managing conflicts.</p>

		<p>TT6. Reflect on self and team performance to inform and improve team effectiveness.</p> <p>TT10. Discuss organizational structures, policies, practices, resources, access to information, and timing issues that impact the effectiveness of the team.</p>
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Deliberate Design

Table 2. IPE Activities within the Dental Hygiene Program IPE Plan

Program Year & Semester 2022-2023	Name of IPE Activity (Type of IPE Activity)	Learners from Other Programs Involved (Abbreviation & Year)	Associated Course/Place in Curriculum (If Applicable)	Faculty Leader(s) from Program	Faculty Leader(s) from Other Programs	Timeframe to be Completed (Month)
Year 1 Fall	LINC Common IPE Experience (IPE Type: Curricular IPE Sub-type: Classroom-Collaborative Online Learning)	Learners from all programs at UT Health San Antonio are placed in interprofessional groups of 4 and group composition varies as a result.	Didactic INTD 5031	Noorpreet Kaur	LINC Didactic IPE Initiative Members: Meredith Quinene (SHP-PA), Bobby Belarmino (SHP-PT), Daniel Saenz (GSBS), Sadie Trammell Velasquez (LSOM) and Cynthia L. Wall (SON), with support from the LINC Faculty Council Members: Moshtagh Farokhi (SOD), Rekha Kar (GSBS), Temple Ratcliffe (LSOM), Kathleen Stevens (SON), and Joseph Zorek (LINC Executive Director)	Fall (Sept to Oct)
Year 1 Spring	LINC Simulation IPE Experience (IPE Type: Curricular IPE Sub-type: Blended – Classroom- Collaborative Online Learning & Simulation)	Learners from all programs at UT Health San Antonio are placed in interprofessional groups of 3-4, and group composition varies as a result.	Program Requirement	David Ojeda	LINC Simulation IPE Initiative Members: Sadie Trammell Velasquez (LSOM), James Cleveland (SON), Diane Ferguson (LSOM), Rebecca Moote (LSOM), Bridgett Piernik-Yoder (SHP), and Kathryn Parke (SON) with support from the LINC Faculty Council Members: Moshtagh Farokhi (SOD), Rekha Kar (GSBS), Meredith Quinene (SHP), Temple Ratcliffe (LSOM), Kathleen Stevens (SON), and Joseph Zorek (LINC Executive Director)	Spring (Jan to Mar)
Year 1 Spring	Ergonomics and Musculoskeletal Disorder Interprofessional Education (IPE Type: Curricular IPE Sub-type: Blended – Classroom, Clinical & Simulation)	DDS Year 1 SHP-OT Year 2 SHP-PT Year 2	DIPC 5001 DENH 3006	Juanita Lozano-Pineda Rebekah Sculley	Michael Geelhoed (SHP-PT) Ricky Joseph (SHP-OT)	Spring
Year 2 Spring	LINC Clinical IPE Experience (IPE Type: Curricular)	Learners from all programs at UT Health San Antonio will be placed in	Program Requirement	Elena Riccio Leach	LINC Clinical IPE Initiative Members: Temple Ratcliffe (LSOM) Rebecca Moote (LSOM), and Marta Vives (SON) with support from the LINC	Spring (Jan to Mar)

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	IPE Sub-type: Blended – Classroom-Collaborative Online Learning & Clinical)	interprofessional groups of 3-4 and group composition will vary as a result.			Faculty Council Members: Moshtagh Farokhi (SOD), Rekha Kar (GSBS), Meredith Quinene (SHP), Kathleen Stevens (SON), and Joseph Zorek (LINC Executive Director)	
Year 2 Spring	An Interprofessional Objective Structured Clinical Exam (iOSCE) for Health Literacy (IPE Type: Co-Curricular IPE IPE Sub-type: Blended – Classroom & Simulation)	DH2, SON,	DENH 4111	Rebekah Sculley Carol Nguyen	Melanie Stone (Center for Ethics and Humanities) Adelita Cantu, SON Oralia Bazaldua (PharmD)	Spring (Mar)

DEFINITIONS
Interprofessional Education (IPE) = Proposed by the World Health Organization and endorsed by IPEC, takes place “when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes” (WHO, 2010; IPEC, 2016). This emphasis on students aligns well with UT Health San Antonio’s QEP, and the expectation is that student-to-student interprofessional learning will constitute the majority of IPE activities on campus. This table is reserved for student-to-student IPE activities.
IPE Partners = Students from other professions/programs involved including their year(s) of study
IPE Types = *Curricular*: IPE activities within formal curricula (e.g., credit-bearing courses, clerkships); *Co-Curricular*: IPE activities outside formal curricula (i.e., volunteer experiences that augment learning/professional development).
IPE Sub-types = *Classroom*: IPE activities in a classroom setting, including in-person and online; *Simulation*: IPE activities in a simulation setting, including in-person and online; *Clinical*: IPE activities in a clinical setting allowing for practical experiences involving direct patient care; *Community*: IPE activities in a community-based setting allowing for practical experiences that do not involve direct patient care; *Blended*: Any combination of IPE Sub-types.
FOOTNOTE
 See Assessment & Evaluation section for more details on how learning outcomes from this IPE Plan are measured.

Table 3. IPE Activities Currently Under Development with Implementation Planned for Academic Year 2024-2025.

Program Year & Semester	Name of IPE Activity (Type of IPE Activity)	Learners from Other Programs Involved (Abbreviation & Year)	Associated Course/Place in Curriculum (If Applicable)	Faculty Leader(s) from Program	Faculty Leader(s) from Other Programs	Timeframe to be Completed (Month)
Year 2	Enhancing Systems of Care for Children with Medical Complexity, HRSA UM2MC45793	DNP DDS Year 3 PA	INTD TBD SHCN, SoD ROTATION	Noorpreet Kaur	Jeff Hicks (SOD), Bea Hicks, (SOD), Carol Nguyen, (SOD), Barbara MacNeill (SOD), Pow Wen, (LSOM), Leticia Bland, (SHP-PA), Amanda Bridges (SON-DNP)	Fall 2024 Spring 2025

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Assessment and Evaluation

Experts in assessment, evaluation, and compliance are led by the Associate Dean for Academic, Faculty and Student Affairs and academic leaders of the SOD. The SOD IPE Task force was formed to support achievement of QEP goals through measurement of IPE learning outcomes. The production of valid and reliable IPE outcomes data is essential to not only understand the impact of interprofessional learning, but also to support faculty efforts to refine and strengthen approaches to IPE instruction and the IPE learning environments they create. It is for this reason that IPE Assessment and Evaluation was identified as a vitally important component of IPE plans recommended by HPAC and the National Center. Furthermore, robust data are also required for QEP/LINC reporting to SACSCOC and for program-level reporting to national accrediting bodies. Importantly, stakeholders within the QEP/LINC project aspire to elevate the stature of UT Health San Antonio through IPE research and scholarly activities, and an intimate understanding of IPE assessment and evaluation is essential to maximize opportunities through such endeavors.

Additionally, the assessment tools PACT and TeamsSTEPPS were considered as part of a longitudinal-based assessment in the program. The intent is for the two assessments to be given to learners who are enrolled in IPE activities. To that end, we will use the Performance Assessment Communication and Teamwork Tools Set, PACT. The PACT contains 5 instruments: two are self-report, pre-post assessments; and three are observational rating tools developed for raters with different levels of experience. All five tools contain items that reflect the five domains of Team STEPPS: Team structure, Leadership, Situation monitoring, Mutual support, and Communication. The PACT tools are designed to provide assessment feedback for learners, and evaluation information for program faculty. The second assessment tool is the TeamsSTEPPS Team Assessment Questionnaire and Team Performance Observation Tool (TAQ-TPOPT). The TAQ collects individual team members' perceptions of team foundation, functioning, performance, skills, leadership, climate/atmosphere, and identity in a 43-item questionnaire. The T-POT is an observational tool used in situ. It was designed to collect objective observations of team structure, leadership, situational monitoring, mutual support, and communication in 25 behavioral ratings. Used in concert, these two measures allow the capture of team member concerns and objective information on teamwork processes.

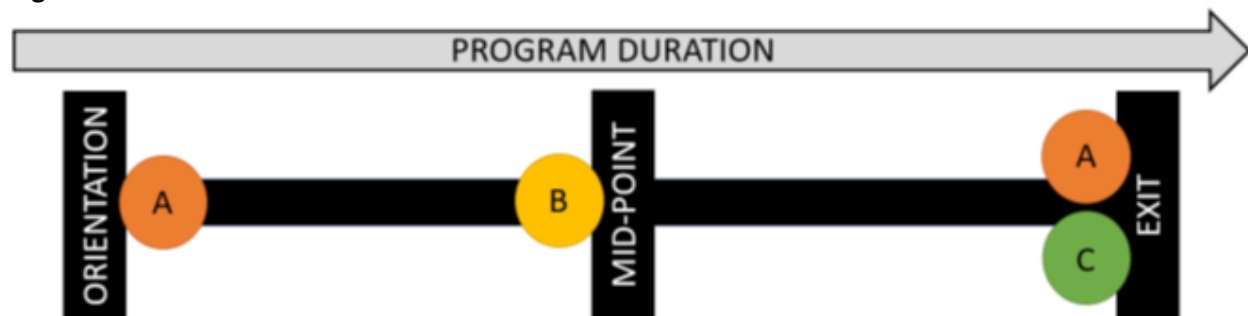
The LINC Core IPE Measurement Plan at UT Health San Antonio consists of four tools administered at three timepoints. Collectively, these tools measure changes in students' reactions, attitudes/perceptions, skills, and behavior related to interprofessional education and teamwork.




Table 4. Tools and Targeted Learning Outcomes of the LINC Core IPE Measurement Plan

Level*	Measurement Tool**	Constructs	Items
Level 1 Reaction	Interprofessional Reactions Tool (IPRT)	<ul style="list-style-type: none"> • Preparation • Relevance • Importance • Satisfaction 	13 self-reported items: <ul style="list-style-type: none"> • 9 quantitative items using a 5-point Likert-type response scale; and, • 4 qualitative items soliciting written responses to open-ended prompts

Level 2a Attitudes/ Perceptions	Student Perceptions of Interprofessional Clinical Education– Revised, Version 2 (SPICE-R2)	<ul style="list-style-type: none"> • Interprofessional Teamwork and Team-based Practice • Roles & Responsibilities for Collaborative Practice • Patient Outcomes from Collaborative Practice 	10 self-reported, quantitative items using a 5-point Likert-type response scale
Level 2b Skills	Interprofessional Education Collaborative Competency Self-Assessment Tool, Version 3 (IPEC-3)	<ul style="list-style-type: none"> • Interprofessional Interactions • Interprofessional Values 	16 self-reported, quantitative items using a 5-point Likert-type response scale
Level 3 Behaviors	Interprofessional Collaborative Competency Attainment Scale– Revised (ICCAS-R)	<ul style="list-style-type: none"> • Communication • Collaboration • Roles & Responsibilities • Collaborative patient-family centered approach • Conflict management/ resolution • Team functioning 	21 self-reported, quantitative items using a 5-point Likert-type response scale
<p>* Modified Kirkpatrick levels 2b (skills) and 3 (behaviors) are combined in this table because IPEC-3 and ICCAS-R report to measure both levels</p> <p>** See Appendices I-IV for complete versions of selected measurement tools</p>			

Figure 1. Administration Schedule of LINC Core IPE Measurement Plan



CORE IPE MEASUREMENT PLAN ADMINISTRATION LEGEND	
	Interprofessional Reactions Tool (IPRT)
	Student Perceptions of Interprofessional Clinical Education–Revised, Version 2 (SPICE-R2) Interprofessional Education Collaborative Competency Self-Assessment Tool, Version 3 (IPEC-3)
	Interprofessional Collaborative Competency Attainment Scale–Revised (ICCAS-R)

LINC Core IPE Measure A1 (pre) administered in August, LINC Core IPE Measure B administered in July, and LINC Core IPE Measures A2 (post) & C administered in mid-February.

Approval of the Dental Hygiene Program IPE Plan via faculty governance within the School of Dentistry is not required.

The approved AY2022-2023 Dental Hygiene Program IPE Plan was submitted to LINC on October 27, 2023.