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 Associate Dean for Academic and Student Affairs within the School of Health Profession (SHP) and the Chair of the SHP IPE Committee are leading the development and implementation of program-specific IPE plans through the contributions and efforts of SHP IPE Committee members and program leaders within each SHP department.

Profession-Specific Accreditation Mandate
The Accreditation Standards for Physician Assistant Education, Fifth Edition, effective September 1, 2020, established and published by the Accreditation Review Commission on Education for the Physician Assistants (ARC-PA) require the integration of IPE into the Physician Assistant Studies curriculum, as evidenced by the following standards/expectations:

Fifth Edition effective September 1, 2020
B2.04 The curriculum must include instruction in interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families and other health professionals.
B2.10 The curriculum must prepare students to work collaboratively in interprofessional patient centered teams. Instruction must:
   A) include content on the roles and responsibilities of various health care professionals,
   B) emphasize the team approach to patient centered care beyond the traditional physician-PA team approach, and
   C) include application of these principles in interprofessional teams

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

Rationale
Plan: UT Health San Antonio’s Strategic Plan 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.
Framework: A successful program must align UT Health’s Vision with the QEP core values and Interprofessional Education Collaborative (IPEC) Core Competencies. To achieve this, departments must strengthen their interprofessional team-based learning by aligning student learning outcomes and instructional objectives with the IPEC Core Competencies. The competencies include 1) communication, 2) teams and teamwork, 3) values and ethics, and 4) roles and responsibilities. Health professions must align the IPEC Core Competencies in the contents of their didactic and clinical educational methods.

Justification: Teamwork is an essential element of patient care and highlights the need for communication and collaboration with the health care team. To meet the needs and provide the best available care health for our community, health care workers need adequate knowledge, skills, and behaviors about practical approaches to provide patient-centered care while working in teams. IPE is a valuable tool to develop strategies for the implementation of evidence-based practices promoting collaboration among multiple disciplines. The evaluation of the acquisition of IPEC competencies warrants a mixed-method approach with numerous modalities of IPE activities listed above. The results of the evaluation will give further insight to students and faculty of the benefits, challenges, and gaps in training towards meeting the IPEC Core Competencies.

Outcome-based Goals
The Department of Physician Assistant Studies has embraced the IPEC model to guide educational objectives and ultimately the curriculum to produce graduates who understand the critical relationship between teamwork and collaborative, patient-centered care, and who will contribute to the achievement of the program mission and vision. We have adopted the specific IPEC sub-competencies listed below as the desired student learning outcomes for IPE. Upon completion of the PA department’s IPE plan learners will be able to:

Competency 1: Values and Ethics -
Work with team members to maintain a climate of shared values, ethical conduct, and mutual respect.
- Measured through observation of interactions during group activities and peer evaluations (Behavior)
  - VE1: Promote the values and interests of persons and populations in health care delivery, One Health, and population health initiatives.
  - VE5: Value the expertise of health professionals and its impacts on team functions and health outcomes.
  - VE6: Collaborate with honesty and integrity while striving for health equity and improvements in health outcomes.

Competency 2: Roles and Responsibilities -
Use the knowledge of one’s own role and team members’ expertise to address individual and population health outcomes.
- Measured through role-playing scenarios and case studies (Learning)
  - RR4: Differentiate each team member’s role, scope of practice, and responsibility in promoting health outcomes.
  - RR5: Practice cultural humility in interprofessional teamwork.

Competency 3: Communication -
Communicate in a responsive, responsible, respectful, and compassionate manner with team members.
- Measured through observation of interactions during group activities, peer evaluations, and simulation activities (Behavior)
  - C1: Communicate one’s roles and responsibilities clearly.
  - C2: Use communication tools, techniques, and technologies to enhance team function, well-being, and health outcomes.
Competency 4: Teams and Teamwork -
Apply values and principles of the science of teamwork to adapt one's own role in a variety of team settings.

- Measured by the ability of the group to meet identified objectives or goals (Results)
- Measured by patient satisfaction, standardized patient feedback, community health outcomes (Results)
- Measured through observation of interactions during group activities and peer evaluations (Behavior)
  - TT2: Appreciate team members’ diverse experiences, expertise, cultures, positions, power, and roles towards improving team function.
  - TT3: Practice team reasoning, problem-solving, and decision-making.
  - TT4: Use shared leadership practices to support team effectiveness.
  - TT5: Apply interprofessional conflict management methods, including identifying conflict cause and addressing divergent perspectives.
  - TT6: Reflect on self and team performance to inform and improve team effectiveness.
  - TT8: Facilitate team coordination to achieve safe, effective care and health outcomes.
  - TT10: Discuss organizational structures, policies, practices, resources, access to information, and timing issues that impact the effectiveness of the team.

The learning outcomes go beyond demonstrating knowledge and understanding of IPEC Competencies, value of IPE and collaborative practice, importance of responsive communication, and understanding the roles of various health professions involved in patient-centered care teams. This program acknowledges that achieving the desired objective must be accomplished within the restrictions of existing academic requirements. The approach is not focused on quantity but rather, how high quality, effective learning experiences can be integrated into the existing program curriculum structure.

Assessment of the student’s learning effectiveness will be measured using Kirkpatrick’s Four Levels of Training Evaluation (Reaction, Learning, Behavior, and Results) and used to connect the training to student learning outcomes and program goals (outlined above). Overall evaluation of the student’s gained knowledge and understanding of IPE principles will be measured through a pre and post activity test (Learning). The student’s perception of the value gained through the training/program activity will be measured by a pre and post activity survey. Assessment of the student’s application and use of the learned knowledge and skills is continually measured in their day-to-day performance during clinical rotations through onsite evaluations by the clinical coordinator, 360 evaluations from health professionals they work with, and evaluations from their assigned preceptor. This is additionally demonstrated by their ability to meet EPAs and Milestones as the student progresses through the program (Behavior).
Deliberate Design

Table 1. IPE Activities within the Master of Physician Assistant Studies IPE Plan

<table>
<thead>
<tr>
<th>Program Year &amp; Semester</th>
<th>Name of IPE Activity (Type of IPE Activity)</th>
<th>Learners from Other Programs Involved (Abbreviation &amp; Year)</th>
<th>Associated Course/Place in Curriculum (If Applicable)</th>
<th>Faculty Leader(s) from Program</th>
<th>Faculty Leader(s) from Other Programs</th>
<th>Timeframe to be Completed (Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1 Fall</td>
<td>[LINC Common IPE Experience](LINC Common IPE Experience) (IPE Type: Curricular IPE Sub-type: Classroom-Collaborative Online Learning)</td>
<td>Learners from all programs at UT Health San Antonio are placed in interprofessional groups of 3-4 and group composition varies as a result.</td>
<td>Program Requirement</td>
<td>Meredith Quinene</td>
<td>LINC Didactic IPE Initiative Members: Bobby Belarmino (SHP-PT), Noorpreet Kaur (SOD), 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)</td>
<td>Fall (Sept to Oct)</td>
</tr>
<tr>
<td>Year 1 Fall &amp; Spring</td>
<td>[SHP Faculty Grand Rounds](SHP Faculty Grand Rounds) (IPE Type: Co-Curricular IPE Sub-type: Classroom)</td>
<td>MLS, SLP, OT, PT, RC Year 1</td>
<td>Quarterly</td>
<td>David Henzi (SHP)</td>
<td></td>
<td>Fall &amp; Spring (Sept / Nov / Feb / Apr)</td>
</tr>
<tr>
<td>Year 1 Fall &amp; Spring</td>
<td>[SHP Student Grand Rounds](SHP Student Grand Rounds) (IPE Type: Co-Curricular IPE Sub-type: Classroom)</td>
<td>MLS, SLP, OT, PT, RC Year 1</td>
<td>Quarterly</td>
<td>David Henzi (SHP)</td>
<td></td>
<td>Fall &amp; Spring (Sept / Nov / Feb / Apr)</td>
</tr>
<tr>
<td>Year 1</td>
<td>[Student-led Faculty Collaborative Clinics](Student-led Faculty Collaborative Clinics) (IPE Type: Co-Curricular IPE Sub-type: Clinical)</td>
<td>MD, BSN, PharmD</td>
<td></td>
<td>Leticia Bland</td>
<td>Nandini Mandlik (LSOM)</td>
<td>Spring (Jan to May) Summer (May to Aug) Fall (Aug to Dec)</td>
</tr>
<tr>
<td>Year 1</td>
<td>[Interprofessional Training with Family Nurse Practitioner (FNP) and Physician Assistant (PA) students using Interprofessional Education (IPE) Objective Structured Clinical Examinations (OSCEs)](Interprofessional Training with Family Nurse Practitioner (FNP) and Physician Assistant (PA) students using Interprofessional Education (IPE) Objective Structured Clinical Examinations (OSCEs)) (IPE Type: Co-Curricular IPE Sub-type: Blended – Classroom &amp; Simulation)</td>
<td>DNP Year 2</td>
<td>PHAS 5201 PHAS 5301</td>
<td>Leticia Bland Steven Skaggs</td>
<td>Paula Christianson-Silva (SON-DNP)</td>
<td>Spring (Jan to May) Summer (May to Aug)</td>
</tr>
</tbody>
</table>

LINC Academic Affairs Council – Master of Science in Physician Assistant Studies – School of Health Professions – Approval Date: October 23, 2023.
| Year 1 | **Managing Dental & Oral Pain** (IPE Type: Curricular IPE Sub-type: Blended – Classroom & Simulation) | Dental Residents | PHAS 6132 PHAS 6131 | Leticia Bland | Jeffery L. Hicks (SOD) Rochisha S. Marwaha (SOD) | Spring (Jan to May) or Fall (Aug to Dec) |
| 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 | LINC Simulation IPE Initiative Members: Sadie Trammell Velasquez (LSOM), James Cleveland (SON), Diane Ferguson (LSOM), Rebecca Moote (LSOM), David Ojeda Diaz (SOD), Bridgett Piernik-Yoder (SHP-OT), and Kathryn Parke (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) | Spring (Jan to Mar) |
| Year 2 Spring | **LINC Clinical IPE Experience** (IPE Type: Curricular IPE Sub-type: Blended – Classroom-Collaborative Online Learning & Clinical) | Learners from all programs at UT Health San Antonio will be placed in interprofessional groups of 3-4 and group composition will vary as a result. | Program Requirement | LINC Clinical IPE Initiative Members: Temple Ratcliffe (LSOM), Angela Kennedy (SHP), Rebecca Moote (LSOM), Elena Riccio Leach (SOD) and Marta Vives (SON) with support from the LINC Faculty Council Members: Moshtagh Farokhi (SOD), Rekha Kar (GSBS), Kathleen Stevens (SON), and Joseph Zorek (LINC Executive Director) | Spring (Jan to 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.
Assessment and Evaluation

We believe that our physician assistant (PA) students transition from didactic-focused learning to clinical-focused learning resembles that of a medical student transition from medical school to a medical residency in many ways including application of IPE competencies. It is because of this similarity that we chose to utilize the AAMC EPAs and Milestones to form a process to develop a competency track for our students. These EPAs and Milestones were created using the AAMC’s Core Entrustable Professional Activities for Entering Residency and the Core Competencies for the Physician Assistant Profession as a guide.

EPAs and milestones allow the PA Program to monitor the student’s trajectory towards preparation for clinical collaborative practice as a licensed physician assistant. EPA and milestone progression are monitored by faculty advisors and the Student Competency Committee quarterly. These EPAs and Milestones also facilitate IPE curriculum analysis by defining the essential IPE competencies within the physician assistant discipline. Gaps in learning can be more easily identified in relation to the competencies of the profession and provide an opportunity to individualize coaching, on a by-student basis, to assist with progression through the curriculum. This framework is expected to assist in faculty development, analysis of program outcomes, assist faculty in recognition of performance expectations of learners and more explicitly demonstrate the skill progression trajectory of each student. Several measurement tools are used including preceptor evaluations, IPE evaluations, peer evaluations, student participation surveys and reflection papers to assess gained knowledge, skills, and abilities pertaining to IPE principles.

Table 2. IPE Competencies reflected in EPAs and Milestones

<table>
<thead>
<tr>
<th>Entrustable Professional Attribute</th>
<th>IPEC Sub-competency</th>
</tr>
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<tbody>
<tr>
<td>EPA 9: Work and communicate effectively as a leader or member of an inter-professional health care team to provide patient-centered care.</td>
<td>VES: Value the expertise of health professionals and its impacts on team functions and health outcomes.</td>
</tr>
<tr>
<td>Interpersonal Communication Skills</td>
<td>VE6: Collaborate with honesty and integrity while striving for health equity and improvements in health outcomes.</td>
</tr>
<tr>
<td>ICS-1: Create and sustain a therapeutic and ethically sound relationship with the patient and family members</td>
<td>C2: Use communication tools, techniques, and technologies to enhance team function, well-being, and health outcomes.</td>
</tr>
<tr>
<td>ICS-2: Use effective communication skills to elicit and provide information</td>
<td></td>
</tr>
</tbody>
</table>
| ICS-3: Work effectively with physicians and other health care professionals as a member or leader of a health care team or other professional group | - C3: Communicate clearly with authenticity and cultural humility, avoiding discipline-specific terminology.  
- C4: Promote common understanding of shared goals.  
- C5: Practice active listening that encourages ideas and opinions of other team members.  
- VE5: Value the expertise of health professionals and its impacts on team functions and health outcomes.  
- TT2: Appreciate team members’ diverse experiences, expertise, cultures, positions, power, and roles towards improving team function.  
- TT3: Practice team reasoning, problem-solving, and decision-making.  
- TT4: Use shared leadership practices to support team effectiveness.  
- TT5: Apply interprofessional conflict management methods, including identifying conflict cause and addressing divergent perspectives.  
- TT6: Reflect on self and team performance to inform and improve team effectiveness. |
<table>
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<tbody>
<tr>
<td>Patient Care</td>
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</table>
| PC-2: Works effectively with patients, families, and other healthcare professionals | - VE5: Value the expertise of health professionals and its impacts on team functions and health outcomes.  
- RR4: Differentiate each team member’s role, scope of practice, and responsibility in promoting health outcomes.  
- RR5: Practice cultural humility in interprofessional teamwork.  
- TT5: Apply interprofessional conflict management methods, including identifying conflict cause and addressing divergent perspectives. |
| PC-3: Partners with the patient, family, and community to improve health through disease prevention and health promotion |  
| - VE1: Promote the values and interests of persons and populations in health care delivery, One Health, and population health initiatives.  
- RR4: Differentiate each team member’s role, scope of practice, and responsibility in promoting health outcomes.  
- TT8: Facilitate team coordination to achieve safe, effective care and health outcomes. |
| Systems Based Practice |  
| SB-3: Actively participates in team-based care |  
| - VE1: Promote the values and interests of persons and populations in health care delivery, One Health, and population health initiatives.  
- RR4: Differentiate each team member’s role, scope of practice, and responsibility in promoting health outcomes. |
● **C2:** Use communication tools, techniques, and technologies to enhance team function, well-being, and health outcomes.
● **TT6:** Reflect on self and team performance to inform and improve team effectiveness.
● **TT8:** Facilitate team coordination to achieve safe, effective care and health outcomes.
● **TT10:** Discuss organizational structures, policies, practices, resources, access to information, and timing issues that impact the effectiveness of the team.

This competency framework utilizing EPAs and Milestones is in keeping with our professional accreditation standards utilizing the medical model of interprofessional education. We feel that this competency framework will continue to ensure the students of the University of Texas Health San Antonio’s Department of Physician Assistant Studies will be able to obtain the IPEC Core Competencies.

The LINC Core IPE Measurement Plan at UT Health San Antonio forms the backbone of IPE assessment/evaluation for all UT Health San Antonio program-specific IPE plans. Valid and reliable tools to measure change in reactions, attitudes/perceptions, skills, and behaviors are included. Table 3 and Figure 1 below provide additional information on tools and administration schedules for the LINC Core IPE Measurement Plan.

**Table 3. Tools and Targeted Learning Outcomes of the LINC Core IPE Measurement Plan**

<table>
<thead>
<tr>
<th>Level*</th>
<th>Measurement Tool**</th>
<th>Constructs</th>
<th>Items</th>
</tr>
</thead>
</table>
| Level 1 Reaction | Interprofessional Reactions Tool (IPRT) | ● Preparation  
● Relevance  
● Importance  
● Satisfaction | 13 self-reported items:  
● 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) | ● 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) | ● Interprofessional Interactions  
● Interprofessional Values | 16 self-reported, quantitative items using a 5-point Likert-type response scale |
Interprofessional Collaborative Competency Attainment Scale–Revised (ICCAS-R) ● 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

* Modified Kirkpatrick levels 2b (skills) and 3 (behaviors) are combined in this table because IPEC-3 and ICCAS-R report to measure both levels

** See Appendices I-IV for complete versions of selected measurement tools

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**Figure 1. Administration Schedule of the LINC Core IPE Measurement Plan**

<table>
<thead>
<tr>
<th>PROGRAM DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIENTATION</td>
</tr>
<tr>
<td>C</td>
</tr>
</tbody>
</table>

**CORE IPE MEASUREMENT PLAN ADMINISTRATION LEGEND**

- **A**: Interprofessional Reactions Tool (IPRT)
- **B**: Student Perceptions of Interprofessional Clinical Education–Revised, Version 2 (SPICE-R2)
  - Interprofessional Education Collaborative Competency Self-Assessment Tool, Version 3 (IFPC-IPE-3)
- **C**: Interprofessional Collaborative Competency Attainment Scale–Revised (ICCAS-R)

LINC Core IPE Measure A1 (pre) is administered in May, LINC Core IPE Measure B is administered in September, and LINC Core IPE Measure A2 (post) & C are administered in November.

The PA IPE Plan was initially approved by the SHP IPE Committee and SHP Curriculum Committee on November 12, 2020.

The initial PA IPE Plan was then updated and approved by the Department of Physician Assistant Studies on October 23, 2023.

The approved AY2023-2024 PA IPE Plan was submitted to LINC on October 26, 2023.