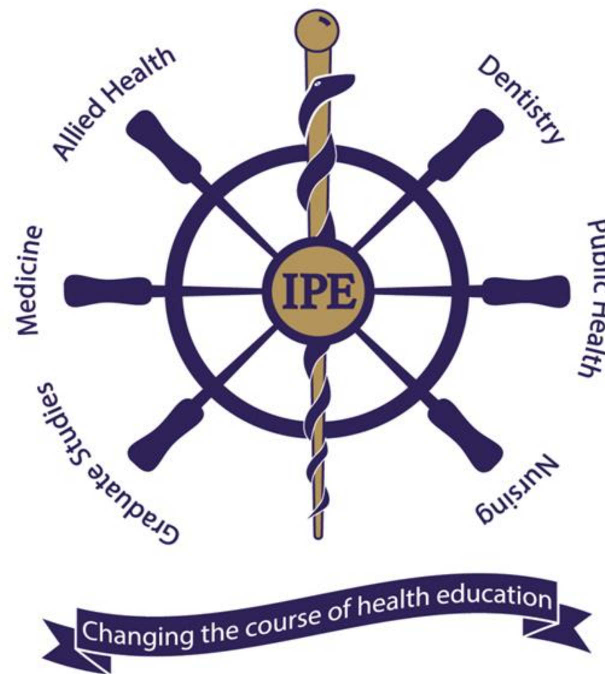
InterProfessional Education



Executive Summary

Louisiana State University Health Sciences Center at New Orleans (LSUHSCNO) is an academic health sciences center offering 31 degree programs across six Schools: Allied Health, Dentistry, Graduate Studies, Medicine, Nursing, and Public Health. Its mission is to provide education, research, and public service through direct patient care and community outreach. Our institutional structure provides significant potential for teamwork and collaboration among health professions students, educators and health professionals. This Quality Enhancement Plan (QEP) is focused on interprofessional education (IPE).

IPE, defined as “when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes” (World Health Organization, 2010), is an integrated component of LSUHSCNO’s collective curricula, reaching first year students in 20 programs (six Schools), and second year students in 18 programs (five Schools). The QEP aimed to broaden and enhance IPE across the institution through three major goals:

- Developing and supporting a robust infrastructure that includes an empowered centralized office for IPE.
- Facilitating faculty participation in IPE.
- Increasing meaningful IPE opportunities that promote learner-centeredness and involve students in patient care teams.

Changing institutional culture is a longitudinal process that requires a commitment from the institution's leadership as well as a broad interest and dedication from students, faculty, and other constituents. This QEP was constructed in order to facilitate this critical culture shift and therefore change the course of health education at LSUHSCNO for many years to come.

Initial Goals and Intended Outcomes

In 2015, the institution established three goals for the QEP focused on IPE. The three goals are noted below with their respective associated intended outcomes.

Goal 1 - Develop and support a robust infrastructure that includes an empowered centralized office for IPE.

1. Develop and support a centralized office for IPE.
2. Streamline registration of IPE courses to facilitate enrollment of students.
3. Coordinate curriculum committees to facilitate participation in IPE activities.
4. Promote and support the Interprofessional Student Alliance.

Goal 2 - Facilitate faculty participation in IPE.

1. Identify and support faculty liaisons to serve as IPE leaders for each School.
2. Develop a toolkit of faculty development educational materials in IPE/collaborative practice, teaching and learning principles, and leadership.
3. Incentivize faculty participation in IPE.

Goal 3 - Increase meaningful IPE opportunities that promote learner-centeredness and involve students in patient care teams.

1. Identify and further develop existing opportunities for IPE.
2. Develop a set of foundational education materials for IPE.
3. Develop new IPE experiences that promote active learning and patient-centeredness.
4. Formalize relationships with clinical sites for additional IPE experiences.
5. Develop a learner-centered portfolio for IPE experiences.

Changes to QEP

The QEP framework guided the institution's development of IPE as an integrated component of program curricula. All of the goals and a majority of the respective outcomes set forth in the QEP have been met or are in progress. Changes to the QEP were a result of constant re-evaluation of the research, institutional resources, student feedback and student learning outcome measures. The remainder of this section will provide a succinct overview of outcome achievements or changes associated with each of the three goals.

Goal 1. The development of a centralized office with School support has enabled the development of meaningful IPE experiences for students.

- Outcome 1 - The development of a centralized office, the Center for Interprofessional Education and Collaborative Practice (CIPECP), with representation from each of the six Schools was fundamental to the institution's QEP. Our team, consisting of a director, coordinator and a representative from each of the six Schools (Faculty Council), has learned how to work interprofessionally and develop appropriate interprofessional learning activities for student learners from the various programs.
- Outcome 2 was not realized, as the CIPECP and School curriculum committees decided it would be more advantageous to develop a two-year longitudinal IPE curriculum integrated within current courses, instead of creating new IPE-specific courses. Therefore, the concept of a streamlined registration process for students was not needed. The reasons for not creating new courses were: 1) the state limitation on the total number of hours within undergraduate programs and 2) the goal of having IPE integrated within existing curricula, as compared to the topic perceived as an "add-on" requirement.
- Outcome 3 - Facilitating student participation in IPE was realized when the six School curriculum committees agreed to a two-year, large-scale, longitudinal IPE curriculum, known as Team Up™. The CIPECP engages Course Directors, Program Directors, Department Heads and/or students as collaborators in developing and refining content, as appropriate. In addition, faculty who are interested in developing a small-scale single IPE activity for their students collaborate directly with the CIPECP.
- Outcome 4 - The CIPECP continues to support the Interprofessional Student Alliance. A major change within the student-led organization occurred in the 2019-2020 academic year. The change included a defined board officer structure requiring representation from each of the six Schools.

<u>Goal 2.</u> Faculty engagement in IPE is fundamental to its sustainability. No changes were made to Goal 2, Outcomes 1, 2 and 3.

- Outcome 1 - Having a CIPECP Faculty Council member from each of the six Schools has been instrumental in communicating IPE information to, from, and within the Schools. A couple of Council members have transitioned to another position within the institution or have retired. However, there has been interest from other faculty, so the transition process has not interfered with moving IPE forward. Our team also recognized the need to build new IPE leaders and sustain IPE, so a staggered rotation system with a term limit of 3

years has been implemented. A document that outlines the roles of an IPE Faculty Council member has been developed and helps to inform faculty and Deans about the role within the CIPECP.

- Outcome 2 - An educational toolkit was developed for faculty and placed on the CIPECP's website for easy access. In addition, the CIPECP developed training sessions for any faculty engaged in its two-year longitudinal IPE curriculum. The CIPECP has also hosted professional development training sessions for faculty as related to IPE.
- Outcome 3 – Incentivizing faculty through professional development has assisted in creating a sustainable IPE program. The CIPECP has offered trainings, which support faculty in their professional development as educators. In addition, the CIPECP maintains a log/records of faculty engagement in IPE-related activities and encourages scholarship. The log supports faculty documentation of their IPE engagement during their annual review, and/or promotion and tenure process. In regards to scholarship, LSUHSCNO has been successful in IPE research and has disseminated its findings in 41 peer-reviewed publications in 21 healthcare journals and 79 presentations at 30 state, regional and national healthcare conferences (Appendix A). Engaging faculty in educational research supports the IPE initiative, but also has the opportunity to translate to other teaching areas. The CIPECP recently defined roles and time associated with being a Team Up™ faculty facilitator. This quantification of time should assist Department Heads, Program Directors and/or Deans in allocating workloads and integrating IPE into teaching time.

Goal 3. The last goal of creating meaningful IPE opportunities for students has been our largest project. Small-scale single event, IPE activities involving 2-4 programs have demonstrated positive student learning outcomes as well as positive student evaluations of the activity. The biggest project over the past four years has been the development and refinement of Team Up™. Challenges are multifactorial and include gaps in the IPE literature for best practices, the lack of validated assessment instruments, institutional resources, and students valuing IPE comparatively to program-specific courses.

- Outcome 1 - During the first year of the QEP, the CIPECP worked to identify existing IPE experiences within the institution and assisted faculty in the refinement and assessment of these experiences. Simultaneously, the CIPECP developed a large-scale, two-year IPE longitudinal curriculum for first and second year students in all Schools, which commenced

August 2017. The curriculum was branded as Team Up: Commit to Compassion, Communication and Collaboration™. The development of new small-scale single event IPE experiences still occurs based upon faculty interest.

- Outcome 2 – The development of foundational IPE learning materials is the focus of Team Up™. The refinement of the Team Up™ curriculum is ongoing. Foundational training materials were created for the Team Up™ faculty to help prepare and support faculty as IPE facilitators. More recently, the CIPECP has engaged Department Heads and Program Directors in identifying Team Up™ content to support program curricular mapping (Appendix B). In addition, an IPE textbook/booklet was created to provide a consistent learning experience across all programs (Appendix B).
- Outcome 3 - Throughout the past 5 years, the CIPECP has worked with faculty to develop and refine small-scale single IPE experiences involving 2-4 programs. Research conducted at LSUHSCNO notes an increase in student active learning results in a higher self-perception of interprofessional learning for both small-scale single learning activities and the large-scale longitudinal IPE curriculum (Team Up™). There is a continual assessment of IPE learning in Team Up™, including a Team Up™ Student Committee that provides feedback in refining the educational experience. Further discussion regarding this Outcome is noted in the next section, Impact on Student Learning.
- Outcome 4 - Formalizing relationships with clinical and community sites to support IPE has not been a focus over the past 5 years, as developing a foundational institutional IPE curriculum has been prioritized. Recent analysis of student learning outcomes has demonstrated positive student learning outcomes in perceptions, knowledge and/or skills. Now that we can confirm IPE learning within the institution, we can begin to develop relationships with external community and clinical partners for practice experience.
- Outcome 5 - The CIPECP did not develop or suggest a learner-centered portfolio for IPE. IPE is a single component of student learning and some academic programs have established educational portfolios for their students. Student IPE reflections and assignments are housed in the institution's electronic educational platform. This central repository provides students the opportunity to transfer their IPE learning and accomplishments to their program's educational portfolio.

Impact on Student Learning

It is common to use the Kirkpatrick Model to evaluate the effectiveness of student IPE training. The Kirkpatrick Model includes four levels: 1) Reaction, 2) Learning, 3) Behavior, and 4) Results. The original four-level model has been expanded to include six categories when evaluating IPE (Barr et al., 2005). Levels 2 and 4 were expanded. Levels 1, 2a (attitudes and perceptions), 2b (skills and knowledge) and 3 are most commonly assessed in IPE environments. Level 4 requires changes in an organization and community based upon practice, which occurs after students graduate. The impact on student learning at LSUHSCNO will be divided between small-scale single events and the large-scale longitudinal IPE experience, and then further subdivided using the modified Kirkpatrick Model for IPE.

Small-scale single event IPE experiences have included 2-4 academic programs. Most single-event learning experiences occur over a one to three-hour period. These experiences have been measured at Kirkpatrick levels 1, 2a, 2b and 3. Student reactions (Level 1) to these experiences have been positive as rated on a five-point Likert scale (1=Strongly Disagree and 5=Strongly Agree), with means ranging between 4-5/5. Common statements assessing student reactions of the experience included: 1) This IPE experience provided sufficient time to learn from, about, and with other students; 2) Everyone in my small group contributed to the discussion; 3) Instructions and goals were clearly stated for the case study; 4) My appreciation for an interprofessional/team-based approach has been enhanced by this experience; 5) The amount of time dedicated to debriefing after the simulation case was sufficient; 6) The debriefing session provided me an opportunity to reflect upon my performance and my team's performance; 7) The facilitator encouraged participation from all students; 8) The facilitator enhanced my learning by asking appropriate stimulus questions.

As related to measuring student perceptions/attitudes (Level 2a) and skills/knowledge (Level 2b), student perceptions were measured using quantitative and open-ended questions. Most of the quantitative questions used national IPE behavioral competencies or validated assessment tools for measurement. In general, student perceptions of IPE and their skills/knowledge have increased after engagement in a single IPE learning activity. Even though positive student responses for learning were received, the CIPECP continuously works with faculty and students to refine IPE learning activities based upon feedback.

The CIPECP is currently collecting student-learning outcomes related to behaviors (Level 3). At this time, we are using a validated instrument, Team Emergency Assessment Measure, to

measure observable team behaviors in high-fidelity simulation mannequin environments. Team behaviors scores are improving when using a simulation-debriefing-re-simulation model.

The two-year longitudinal Team Up™ experience has been evaluated from a quantitative and qualitative perspective. At this time, LSUHSCNO has completed two iterations of Team Up™. The CIPECP used a validated perception tool (SPICE-R2), individual reflections, team reflections and projects to assess IPE learning. The SPICE-R2 is a ten question quantitative IPE perception tool used with early learners. The SPICE-R2 has been administered in two ways: 1) students provide real time rankings of their perceptions, and 2) students rank their perceptions from a retrospective model and in real time.

Scores from the SPICE-R2 indicated students overestimate their perceptions as novice learners (known as response shift bias). Therefore, a retrospective pre-/post-model to measure change is more appropriate. When using a retrospective pre-/post-model, collectively all students in the first cohort (2017) had a statistically significant positive change in their perceptions of IPE after engaging in Team Up™. When analyzed by Schools, the School of Medicine students had a decline in IPE perceptions as opposed to the other Schools. However, with our second cohort (2018), all students collectively and by School had a statistically significant positive change in their perceptions of IPE after engaging in Team Up™. We hypothesize these positive changes in student learning outcomes are a result of a continuous quality improvement approach to curriculum refinement.

Quantitative outcomes are not the only opportunity to measure student learning. Students engaged in IPE reflected upon their interprofessional growth each year with outcomes as noted: 1) Learned about other professions/professional roles; 2) Learned about other professions' education/training; 3) Learned that patients are better served when a team collaborates; 4) Learned more about my role on an interprofessional team; 5) Met students from other programs/developed friendships; 6) Improved communication skills (comfortable talking with other students from different profession and confident in contributing to the conversation); 7) Broaden my perspectives/awareness of other perspectives; 8) Improved collaboration skills; 9) Learned to appreciate/respect other professions and perspectives; 10) Improved active listening skills; 11) Increased awareness of importance of teamwork; and 12) Better understanding of healthcare complexities. In addition to the outcomes noted above, we believe these two student quotes also highlight student learning from Team Up™:

- *"I think by introducing other health care programs to each other through Team Up, it created a sort of camaraderie and unity on campus and within LSU Health in general...In the beginning we all felt like our programs were all separate from each other, but by the end of Team Up we had learned so much from each other and we all felt like we were all pieces to one whole. I now have a better understanding and respect for other programs and feel more prepared to collaborate in a health care setting."*
- *" I would say for myself, the team interactions over the span of the past two years influenced my interprofessional growth by increasing my confidence and self-esteem from repeated exposure in the close proximity and collaboration with the other health care disciplines. I credit the monthly group meetings during the years for my growth. It certainly required the two-years worth of interaction via meetings and projects until the mental walls of insecurities and doubt began to slowly evaporate. I became more confident in my discipline as I learned each other's and we began to synchronize by the end of year 2. Interprofessional growth was achieved after everyone became comfortable with their selves, due to the cumulative time together. Then individual strengths began to appear as we worked together on the poster project."*

Reflection

The IPE movement in the United States is relatively new, formalized in 2011. The Interprofessional Education Collaborative (IPEC) formally published an initial report outlining IPE expectations and behavioral competencies (IPEC, 2011). Additionally in 2019, the Health Professions Accreditors Collaborative (HPAC) published a guidance document on IPE required accreditation standards. These documents and many other resources have stimulated the advancement of IPE (HPAC, 2019). The success of the QEP at LSUHSCNO can be attributed to having a centralized office with dedicated personnel and faculty staying abreast of national IPE guidance and literature. It has been a team effort between various internal stakeholders, such as central administration, central departments (facilities, information technology, library), and faculty, staff and students from the six Schools and multiple programs. The community has also embraced IPE, through student engagement with sixty community members on an annual basis, and community organizations supporting student team poster presentations. Sustaining a centralized office will be foundational to an integrated IPE curriculum.

The CIPECP at LSUHSCNO is recognized as a leader and collaborator for advancing research in student learning outcomes related to this specialized area of education. While engaging in national and international collaborative research, LSUHSCNO has had the opportunity to compare and contrast IPE curricula and institutional resources. This knowledge has supported requests from the CIPECP to central and School administration for consideration. Examples have included support for faculty liaisons to attend IPE conferences, a biostatistician student worker and web-based platforms to develop student learning resources. In addition, there have been unanticipated outcomes from the QEP, such as students using various floors and buildings (outside of their program location) to study; faculty inviting faculty from other programs for educational support (dental hygiene faculty educating physician assistant students on oral health); the inclusion of the School of Medicine's Ear, Nose and Throat residents in Advanced Dental Education Grand Rounds; audiology students educating and fitting dental students with hearing plugs; and both the School of Medicine and Nursing's Simulation Centers offering interactive learning opportunities for students. The QEP focused on educating students in a collaborative model to health and health care delivery has stimulated opportunities beyond CIPECP efforts.

References

Barr, H., Koppel, I., Reeves, S., Hammick, M., & Freeth. D. (2005). Effective Interprofessional Education: Argument, Assumption and Evidence. Oxford: Blackwell.

Health Professions Accreditors Collaborative (2019). Developing Quality Interprofessional Education for Health Professions. Retrieved from https://healthprofessionsaccreditors.org/ipe-guidance/.

Howard GS, Dailey PR. Response-shift bias: A source of contamination of self-report measures. J Appl Psychol. 1979;64(2):144-15.

Interprofessional Education Collaborative Expert Panel. (2011). Core competencies for interprofessional collaborative practice: Report of an expert panel. Washington, D.C.: Interprofessional Education Collaborative.

World Health Organization (2010). Framework for action on interprofessional education and collaborative practice. Geneva: World Health Organization.

Appendix A: Most recent IPE publications

Center for Interprofessional Education and Collaborative Practice

Congratulations to LSUHSC-New Orleans faculty, staff and students who are engaging in interprofessional education and collaborative practice research.

2021:

Gunaldo,T.P., Owens, J., Andrieu, S.A., Mercante, D.E., Schiavo, J.H., & Zorek, J.A. (2021). Assessing dental student perceptoins after engaging in a longitudinal interprofessional education curriculum: A preliminary study. *European Journal of Dental Education*

2020:

Barker, T., Allen, H., Levitzky, E. & Gunaldo, T.P. (2020). Comparison of Two Dental Hygiene Student Cohorts Receving Varying Interprofessional and Intraprofessional Currirula. *Health, Interprofessional Practice & Education*, 4(1).

Chappell, R., Goumas, A., Hollie, S., Levitzky, E., & Gunaldo, T.P. (2020). Measuring student interprofessional skills in the roles/responsibilities competency. *Journal of Physician Assistant Education*.

Gunaldo, T.P., Augustus-Wallace, A., Schilling, D., Hicks, M., Goumas, A., & Levitzky, E. (2020). Gaining an understanding of inteprofessional roles and responsibilities among pre-professional health students. *Health, Interprofessional Practice & Education*, 4(1).

Gunaldo, T.P., Augustus-Wallace, A., Brisolara, K., Hicks, M., Mercanter, D., Synco, T., Zorek, J. & Schilling, D (2020). Improving stereotypes: The impact of interprofessional education in pre-health students. *Journal of Interprofessional Care*, doi 10.1080/13561820.2020.1806218.

2019:

Allen, H., Schwartz, E., & Gunaldo, T.P. (2019). Creating awareness for social determinants of health through interprofessional service-learning experiences with dental hygiene and nursing students. *Journal of Dental Hygiene*, 93(3), 22-28.

Breitbach, A., Lockeman, K., Gunaldo, T.P., Pardue, K., Eliot, K., Goumas, A., Kettenbach, G., Lanning, S., & Mills, B. (2019). Utilizing share experitise across contects to engage in mulit-institutional interprofessional scholarship. *Journal of Allied Health*, 48(3), 85-90.

Brisolara, K.F., Culbertson, R., Levitzky, E., Mercante, D.E., Smith, D.G., & Gunaldo, T.P. (2019). Supporting health system transformation: The development of an integrated interprofessional curriculum inclusive of public health students. *Journal of Health Administration Education*.

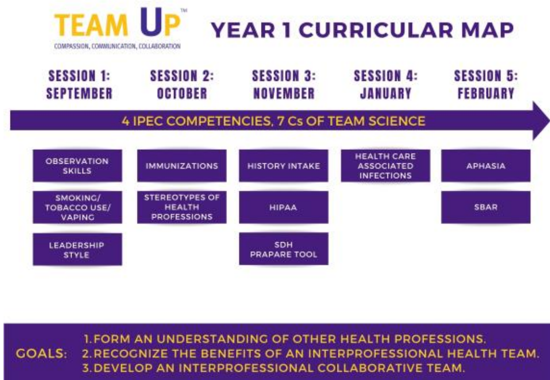
Brisolara, K.F., Gasparini, S., Davis, A.H., Sanne, S., Andrieu, S.C., James, J., ... & Gunaldo, T.P. (2019). Supporting health system transformation through an interprofessional education experience focused on population health. *Journal of Interprofessional Care*, *33*(1), 125-128.

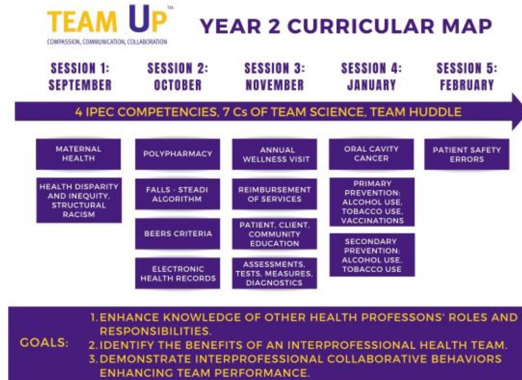
Harrison-Bernard, L., Naljayan, M., Mercante, D., Gunaldo, T.P., & Edwards, S. (2019). Longitudinal interprofessional education in a graduate physiology course. *Advances in Physiology Education*.

Leithead, J., Garbee, D., Yu, Q., Rusnak, V., Kiselov, V., Zhu, L., & Paige, J. (2019). Examining interprofessional learning perceptions among students in a simulation-based opearint room team training experience. *Journal of Interprofessional Care*, 33(1), 26-31.

Appendix B: Resources for Team Up™ curriculum

Curricular Maps





Sample of a Learning Activity

YEAR 1, SESSION 2
DEVELOPING AN INTERPROFESSIONAL IMMUNIZATION TEAM
CAPABILITY ●● COMMUNICATION ●● COGNITION
26

LEARNING OBJECTIVES
AT THE END OF SESSION 2, STUDENTS WILL
1. communicate positive and negative 'in-group' profession perceptions and why they exist.
2. articulate professional and interprofessional roles on an immunization team.
30

Immunizations: Sharing your perspective
4:13-4:20PM

- The purpose of the activity is to develop an interprofessional approach to improve immunizations.
- The team will develop skills in cooperation and coordination. Specific to this activity, cooperation involves the willingness to team to improve immunization rates and willingness to share personal and professional perspectives; coordination involves demonstrating teamwork behaviors when developing a strategy to improve immunization rates.

Scroll to the next page to begin the discussion.
32

Each student should share his/her professional perspective regarding parent choice to immunize children.
- Does your professional perspective differ from your personal opinion?
- What information about immunizations, titers and herd immunity is taught within your program?
- Students should share their professional perspective on if asking a question about immunization history should be included during a patient history or interview.

Scroll to the next page to begin the case.
33

Immunization Case
4:20-4:35PM

Now that you have baseline information about professional training, consider the following scenario:
- Your interprofessional team has a pediatric group practice and your team has parents who have expressed their concerns about having their children being around children who are not vaccinated in your office AND you have parents that have expressed their concerns about caregiver/parent-centered care, the right to make informed decisions, the fear of an unknown link of vaccinations and conditions such as autism (scientifically unfounded), choosing not to vaccinate.

Scroll to the next page to begin the discussion.
34

Vaccination Coverage (%)

Considering Louisiana's vaccination rates, discuss how your team can collaborate and integrate clinical care and public health interventions to optimize population health:
- what are 2-3 talking points to address the concerns of both parent groups?
- what health professionals in your office will provide education regarding immunizations?
- how will your team work together to document immunization education?

Scroll to the next page to continue the discussion.
35