

# **Interprofessional Simulation Exercise: Baby Boy Blue (BBB)**

## **Instructors' Resource Guide**

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## **Instructors' Resource Guide**

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## **Interprofessional Simulation Exercise: Baby Boy Blue (BBB)**

### **Directions for Use**

This IPE teaching tool can be implemented in a variety of ways to meet learner needs. Two options for implementation are provided.

**Option 1** is based on a discussion format. Participants can watch the Baby Boy Blue video cases demonstrated with good (Appendix D) and poor (Appendix E) IPE principles. Please note Appendix A, the Instructor only video resource, contains IPE competencies to guide discussion.

**Option 2** is based on an interactive simulation case format. Participants can engage in the Simulation Case Baby Boy Blue [Appendices B (instructor) and C (participant)]. The debriefing guide within Appendix B can help guide discussion after the simulation case. Chosen IPE principles to review can be reinforced by watching components of the Baby Boy Blue video case demonstrated good (Appendix D) and poor (Appendix E) IPE principles.

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## Purpose/Goal of the Resource

### Introduction:

The case of Baby Boy Blue (BBB) is a medically complex, ethically and emotionally provocative teaching resource that is designed to familiarize educators with the goals of the Interprofessional Education Collaboration (IPEC). Interprofessional education occurs when students from two or more professions learn about, from and with each other to promote effective collaboration, improve quality of care and patient safety, and reduce medical error<sup>1</sup>. A national recommendation for interprofessional education is not new as repetitive calls for transformation can be traced back for more than forty years. The practice of bringing health care professionals together in order to practice more effectively utilizing the IPEC guiding principles/core competencies: values and ethics for interprofessional practice; roles and responsibilities; interprofessional communication; and team and teamwork has been described and studied in many domains<sup>2-7</sup>.

Academic health centers worldwide are choosing different educational vehicles to try and achieve a similar shared vision: a workforce that includes:

- 1) Present and future healthcare providers who are educated using a Competency Based Interprofessional Healthcare Curriculum
- 2) Healthcare providers who are educated in teams and are collaborative “practice ready” when they enter clinical practice
- 3) Team driven collaborative practice that improves the health care service provided to patients, strengthen our health systems, and continue to improve health outcomes.

### Goals and Objectives:

This resource can be utilized as an interprofessional simulation based case, video instruction exercise/discussion or standardized patient exercise that is intended to provide health professional students with a structured learning experience working as an interdisciplinary health care team. Upon completion of this interactive scenario the **faculty educator** will be able to:

1. Integrate teamwork principles into daily teaching practices to foster a climate of patient/ population care that is safe, timely, effective and equitable.
2. Support learner understanding and respect of individual providers’ roles and those of other professions to collaboratively address the healthcare needs of patients.
3. Apply interprofessional communication techniques in daily practice to support a team approach to patient care

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- a. Applies closed loop communication techniques in all professional interactions. Closed loop communication is a format whereby the practitioner clearly identifies the team member they are communicating with and the team member checks back and reports that the communication was received and the task was completed. For example, Dr. Morse, please call a trauma alert for this patient and page OB stat. Dr. Montgomery, the trauma alert has been placed and the operator has paged any OB staff stat. This ensures that the orders/requests were understood and completed. Otherwise, team members may mistakenly believe that others have undertaken the task that can result in serious delays in care.
  - b. Creates a climate where providers apply a shared mental model. A shared mental model is an explicit verbal conversation about the plan of care, differential diagnosis or plan of action. This allows for team members to be aware of and working towards the same goals. In addition, it provides an opportunity for competing views, differentials or plans to be identified and discussed.
4. Demonstrate a climate of mutual respect and shared values to promote acceptance and understanding of others' values to allow for optimal patient care and support

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## The Conceptual Background

This resource was developed as a faculty development instructional tool to promote team training, critical thinking, and reflection. However, it is also relevant for numerous healthcare professionals or students such as: nurses, physicians, social workers, pharmacists, pre-hospital providers, nurse practitioners, and physician assistants. We hope that through the use of this curriculum, which was developed by the Drexel University Partnership for Interprofessional Education, learners at other institutions will be stimulated and further engaged to adopt interprofessional education as a foundation for the future education of all healthcare providers.

The case of Baby boy blue is a critically ill newborn delivered precipitously to an opiate addicted mother in the emergency care setting. The unfolding case requires optimal management of a newborn in respiratory distress, a decompensating drug addicted mother and a distraught father. Participants need to work through the case utilizing team communication and decision making, both of which influence the clinical case outcomes.

The key learning objectives of the case are IPE principles that are highlighted during the case. Participant faculty and students have the opportunity to role-play during the simulation and then debrief utilizing guided and self-reflection. The initial stressful situation where two patients present in extremis highlights the previously described four IPE core competencies:

1. Values and Ethics. Work with individuals of other professions to maintain a climate of mutual respect and shared values.
  - a. A newborn delivered to a drug-addicted mother is meant to be a purposeful challenge to stimulate conversation regarding each provider's values and ethics. The ability to maintain the dignity and privacy of both patients while sustaining high quality care is crucial to the case.
2. Roles and Responsibilities. Use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of the patients and populations served.
  - a. Participants thrive in the case when they have the ability to better understand their own roles and communicate them to the simulated patients and their families.
  - b. The case requires the interdependent actions of multiple healthcare providers: nurses, social work, pediatricians, midlevel providers (nurse practitioners and physician assistants) and physicians. Each provider has an opportunity to learn more about others' skills levels and roles.

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3. Communication. Case participants will be presented with patients, families, communities, and other health professionals. Each member of the healthcare team should act in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease.
  - a. The case is an inherently emotionally challenging case that brings multiple disciplines together. Such an opportunity allows participants to refine their communication skills to ensure the flow of information to and from members of the diverse healthcare team.
  
4. Team and Teamwork. Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan and deliver patient-/population-centered care that is safe, timely, efficient, effective, and equitable.
  - a. Participants are able to integrate and apply team strategies to care for the mother and newborn in this case. There are several opportunities for branch points in the case where patient care goals should be discussed within the time frame of the case.

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### **Practical Implementation Advice**

#### **Equipment/Materials needed:**

##### **For Option 1 Video Experience: (Total Time – minimum 1 hr 15 minutes)**

1. Instructor Video Only Resource (Option 1) **Appendix A**
2. Video example of good IPE principles **Appendix D**
3. Video example of poor IPE principles **Appendix E**
4. Video playback with large screen
5. Quiet room for discussion
6. Ability to set up debriefing group in circular fashion to promote active discussion

##### **For Option 2 Immersive Experience: (Total Time minimum: 1 hr 20 minutes)**

1. Instructor Simulation Case Guide (Option 2) **Appendix B**
2. Learner Stimulus **Appendix C**
3. Video example of good IPE principles **Appendix D**
4. Video example of poor IPE principles **Appendix E**
5. High Fidelity Simulation Room (Consider video recording if playback will be used in debriefing)
6. Infant simulator
7. (if able) Standardized patient/ actor to play the roles of “mom” and “husband”
8. Pregnancy simulator
9. Neonatal resuscitation equipment (BMV, warmer, Bulb suction, IV start equipment, simulated injectable drugs labeled Narcan)
10. Quiet Room for debriefing and discussion
11. Ability to set up debriefing group in circular fashion to promote active discussion

### **Projected length of training sessions:**

#### **Option 1- Video Experience (Total Time – minimum 1 hr 15 minutes)**

Complete the exercise in groups of 4 – 5 educators from diverse disciplines (i.e. Health Professions: nursing, nurse practitioners, physician assistant, emergency medicine physicians, obstetric physicians, pediatric physicians, pre-hospital emergency medical technicians, pharmacist or pharmacy technician)

\*Time in parentheses mark the appropriate start in each video

Total length of poor IPE video and good IPE video = (12 min 58 seconds)

1. View Case Introduction (\*38 seconds)
1. View the “poor IPE practice” BBB case. (\*6 minutes 45 seconds)
2. View the “good IPE practice” BBB case. (\*5 min 56 seconds)
3. Debrief both cases to compare and contrast the differences in team dynamics and the impact on patient care. (60 minutes)

Total Time: Approximately 1 hr 15 minutes for experience

Debriefing discussion: 60 minutes

## **Interprofessional Simulation Exercise: Baby Boy Blue (BBB)**

### **Discussions Points: Good example of IPE Video:**

1. Values and Ethics: Work with individuals of other professions to maintain a climate of mutual respect and shared values. (Video clip: Starts at \*4 min 26 seconds to 6 min 11 sec)
2. Roles and Responsibilities Use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of the patients and populations served. (Video Clip: Starts at \*0:38 to 1 minute)
3. Communication: Communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease. (Video Clip \*1 min 15 sec to 2 min 30 seconds) second clip (\*4 min 18 sec to 6 min 11 sec)
4. Team and Teamwork: Demonstration of shared mental model and check in with team members. (Video Clip: \*2 min 30 sec to 4 min)

### **Discussions Points: Poor example of IPE Video:**

1. Values and Ethics: Values and Ethics: Work with individuals of other professions to maintain a climate of mutual respect and shared values. (Video clip: \*1min 02 seconds to 1 min 48 sec)
2. Roles and Responsibilities: Roles and Responsibilities Use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of the patients and populations served. (Video Clip: \*1 min 48 sec to 2 min 18 sec)
3. Communication: Communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease. (Video Clip: \*Beginning of video to 1min 2 sec)
4. Team and Teamwork: Demonstration of shared mental model and check in with team members (Video clip: \*2 min 24 sec to 3 min 28 sec)



## **Interprofessional Simulation Exercise: Baby Boy Blue (BBB)**

**OR**

**Option 2- Immersive Simulation Experience (Total Time minimum: 1 hr 20 minutes)**

### **Faculty/Facilitator Needs:**

- Instructor Simulation Case Guide (Option 2) **Appendix B**
- Learner Stimulus **Appendix C**
- Video example of good IPE principles **Appendix D**
- Video example of poor IPE principles **Appendix E**

1. Faculty is immersed as active participants in the BBB case and completes the simulated case.  
Prebriefing: 5 minutes  
Baby Boy Blue Simulation case: 15 minutes
2. Debrief the case as a group focusing on the identified learning objectives and compare the differences between the two cases. (30 minutes)
3. View the “good IPE practice” BBB case.  
(Case introduction: \*38 seconds)
4. View the “poor IPE practice” BBB case.  
(Case introduction: \* start of video)
5. Debrief the case as a group focusing on the identified learning objectives above. (20 minutes)

### **Practical Implementation Advice** - For Faculty Educator Participants

#### **Option 1- Video Experience**

Complete the exercise in groups of 4 – 5 educators from diverse disciplines (i.e. Health Professions: nursing, nurse practitioners, physician assistant, emergency medicine physicians, obstetric physicians, pediatric physicians, pre-hospital emergency medical technicians)

1. View the “less than ideal IPE practice” BBB case.
2. View the “ideal IPE practice” BBB case.
3. Debrief both cases to compare and contrast the differences in team dynamics and the impact it had on patient care.

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**OR**

### **Option 2- Immersive Experience**

6. Faculty is immersed as an active participant in the BBB case and completes the simulated case.
7. Debrief the case as a group focusing on the identified learning objectives and compare the differences between the two cases.
8. View the “less than ideal IPE practice” BBB case.
9. Debrief the case as a group focusing on the identified learning objectives above.
10. View the “ideal IPE practice” BBB case.

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## **Tips for Successful Implementation**

### **Effectiveness and Significance**

This resource has been very effective to highlight the inherent challenges in communication and teamwork skills during high stress situations. To date more than 40 faculties and approximately 100 graduate and undergraduate nursing and physician participants have taken part in our interdisciplinary educational courses. The courses began two years ago championed by Mary Ellen Smith Glasgow, PhD, RN, ACNS-BC as part of her work as a Robert Wood Johnson Executive Nurse Scholarship. The courses are currently available to all physician and nursing faculty on a quarterly basis.

Participants have suggested that the application of IPE principles through a clinically challenging case has given them a greater appreciation of how IPE principles can lead to improved patient care. The application of shared values, teamwork, communication and an understanding of roles and responsibilities is an integral part of improved outcomes in our library of scenarios.

### **Lessons Learned:**

The IPE guiding principles were incorporated into the framework of six simulation experiences. Designing a multi-disciplinary team simulation with competing critical care patient needs required immediate team engagement and challenged the full scope of knowledge, skills and abilities of each participant. Learners were able to put the challenges of ethics, roles, communication and teamwork into greater perspective when two patients present in extremis. The benefits of IPE were more readily adopted and implemented when participants immediately grasped how those principles were able to influence patient outcomes. Simulation provided a safe learning environment that instilled a climate of effective communication and teamwork for students from multiple disciplines. This led to improved simulated patient care that was safe, timely, efficient and equitable.

Our previous experiences with developing an IPEC for students identified the need for faculty development with IPE. The aforementioned interprofessional educational sessions illustrated the need for high-level institutional support to guarantee success. Expert practitioners and faculty, as well as administrators who championed the implementation of our IPEC facilitated successful negotiation of a challenging process. The primary challenges identified during the IPEC and methods of resolution are described below:

1. Scheduling – Facilitation of faculty and practitioner attendance required a dedicated individual to coordinate learner and faculty schedules.
2. Case Development – Each case required input from all specialties to ensure technical, clinical and role accuracy for all. In addition to collaboration in writing the cases, all specialties participated in pilot testing of the content.

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- This further allowed for development and evaluation of the case. Future work will further integrate other specialties such as social work and pharmacology.
3. Technology Issues – Experimentation with different recording technologies including high-definition cameras, headsets, and microphones to enhance fidelity and permit evaluation.
  4. Evaluation (including debriefing) - A structured facilitated model of debriefing, *Debriefing with Good Judgment*, from the Center for Medical Simulation, Harvard University was adopted for use in high fidelity simulation. The model of debriefing has 3 phases: reactions, analysis and summary. It is focused on understanding the participant's frames or mental models that drove the actions or decisions that were seen in the simulated case. Identifying and closing performance gaps in a learner-centered environment are hallmarks of this model of debriefing. Faculty members were trained with an initial immersive week-long course and then reinforced with videotape review, role modeling and ongoing training. An expansion of the pre-briefing and debriefing phases to expand learning is planned in the future.
  5. Coordination of large numbers of learners – The coordination of large numbers of learners of multiple specialties required dedicated faculty, multiple well-organized meetings and a willingness to work through challenges to ensure the success of the project.

Development of faculty IPEC – As a result of our experiences the faculty resource case with *Baby Boy Blue* was developed to enhance faculty skills with IPE. As a result of our successful implementation of an IPEC curriculum with students we are well positioned to expand our training to include rigorous faculty development and to disseminate our experiences and knowledge.

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### Glossary of Terms:

Closed loop communication is a format whereby the practitioner clearly identifies the team member they are communicating with and the team member checks back and reports that the communication was received and the task was completed.

Interprofessional is often defined as a group of individuals from different disciplines working and communicating with each other individuals. In the interprofessional learning environment each member provides his/her knowledge, skills, and attitudes to augment and support the contributions of others (Hall and Weaver, 2001).

Multidisciplinary can be defined as the integration of professionals from different disciplines but does not imply integration or harmony across disciplines.

A shared mental model is an explicit verbal conversation about the plan of care, differential diagnosis or plan of action. This allows for team members to be aware of and working towards the same goals. In addition, it provides an opportunity for competing views, differentials or plans to be identified and discussed.

The term transdisciplinary may be purposefully selected to convey the commitment of the participants to strive to develop sufficient trust and mutual confidence to transcend traditional disciplinary boundaries and adopt a more comprehensive approach.<sup>8</sup>

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