Baker College

A white paper on the

Virtual Clinical Experience Using EHR Go and a Virtual Clinical Instructor

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Introduction

In 2020, with the Covid-19 pandemic, nursing education was required to make a radical shift when faced with the inability to provide clinical experiences at healthcare facilities or in a simulation lab to nursing students. Quickly, to avoid additional nursing shortages, boards of nursing lifted existing simulation limitations. This allowed nursing schools to transition students to virtual simulation experiences to fulfill clinical education hour requirements. The 2020/2021 academic year resulted in many healthcare facilities reopening for nursing clinical experiences. However, many students were prevented from in person clinical experiences because they were required to quarantine due to Covid-19 exposure, tested positive for Covid-19, or had other illnesses.

In previous semesters, simulations were conducted in simulation labs to replace missed clinical hours. These were completed throughout the semester. Although this is a highly effective way to replace clinical hours, it is not without significant challenges. A few identified include:.
1. Time and labor intensive for faculty.
2. Costly due to compensation for simulation technicians and trained facilitators.
3. Scheduling issues due to limited access to simulation labs already in use for routine simulations and laboratory experiences.
4. Inability for quarantined students to participate in a simulation lab setting.

Due to these challenges and the increased volume of missed clinical hours in the fall of 2020, numbering approximately 300 missed clinical days, it became apparent that continuing in-person simulation was not feasible.

The following paper discusses an innovative method used by Baker College School of Nursing during the spring semester of 2021 to address BSN students' missed clinical hours. The method incorporated the use of paid virtual clinical instructors and the EHR Go product.

Problem

Baker College School of Nursing is a private non-profit college composed of five campuses that offer a pre-licensure BSN program. The total number of BSN students requiring clinical experiences during the 2020/2021 academic year was 743 during the fall 2020 semester and 714 during the spring semester 2021. Additionally, several students had multiple clinical rotations requiring placement at two different clinical facilities during the same semester.

The nursing program uses multiple facilities across the state and competes with a number of other higher education institutions for clinical unit placements. Clinical placements frequently do not allow for additional clinical hours on the unit to make-up for missed hours. Adjunct clinical instructors are contracted for a clinical rotation and the contract does not include payment for any additional clinical instruction hours when students are ill and miss clinical experiences. Making up these missed clinical hours historically has been the responsibility of full time faculty.

In the fall 2020, multiple students were unable to complete clinical hours and required an alternative method to make-up missed hours. The increase in clinical absences brought forward several problems;
1. Lack of consistency on how clinical absences were made up at a campus.
2. Lack of consistency on how clinical absences were made up across all campuses.
3. Lack of training on how to conduct a virtual or in-person clinical make-up.
4. The additional time commitment for full time faculty to facilitate make-up clinical.

All these issues resulted in full time faculty facilitating virtual or in person simulation to make-up clinical hours for students. However, lack of training, limited access to developed simulations, and increased time expectations resulted in faculty anxiety, stress, and verbalized concerns. It quickly became apparent that this model was problematic. The additional workload resulted in significant overload and negatively impacted morale. The continuation of the Covid-19 pandemic made it apparent to the School of Nursing administration that something needed to change for the spring 2021 semester. It was imperative that students receive consistent, quality make-up clinical education when they were unable to attend in person clinical at a healthcare facility.

Solution
The decision was made by the School of Nursing, with Baker College Administration support, to create a standardized virtual clinical experience for students who missed clinical assignments due to the pandemic. Every student who missed a clinical experience that could not be completed at the clinical site, would be required to make-up missed clinical hours in a consistent structured program. This program was developed by the School of Nursing simulation coordinator who is a Certified Healthcare Simulation Educator. The program consisted of trained nursing adjuncts who would serve as virtual clinical instructors to guide students in the learning experience. The use of the EHR Go product, Google Docs, and Zoom provided the consistent resources needed to create an optimal learning experience. All healthcare students within the college have access to these resources without added expense.

Virtual Clinical Instructor
Virtual clinical instructors were recommended by each campus' Director of Nursing. Each instructor was MSN prepared and an experienced clinical instructor. Nine clinical instructors were recommended across the five campuses. The decision was made to train each virtual clinical instructor based on their clinical expertise and availability to cover clinical courses. Three adjunct clinical instructors were found to have extensive practice experience in a variety of specialties. Additionally, they had minimal or no teaching obligations during the spring 2020 semester. This allowed them the flexibility and time to facilitate the majority of virtual clinical hours for the semester. Virtual clinical instructors were paid for the three hours of training necessary to conduct virtual clinical experiences. Compensation during the semester was provided at 50% of the number of clinical hours a student was required to make-up. For instance, if a student missed eight hours of clinical, the virtual clinical instructor would be compensated four hours.

EHR Go

The School of Nursing simulation coordinator began using EHR Go for clinical make-up during the fall 2018 semester. The campus found that using this product was an effective way to keep the students engaged. The simulation coordinator shared her experiences with the product and encouraged the integration of EHR Go into labs, didactic courses, and high fidelity simulations in addition to its use in clinical make-up hours. These previous experiences resulted in the decision to use EHR Go for the spring 2021 semester virtual clinical make-up.

EHR Go is an on-line electronic health record program with 657 health records, 428 assessment scenarios, and 2774 available learning resources. This resource is purchased annually for all healthcare programs' offered by Baker College and there is no additional cost to the students for use. The program consists of "realistic, customizable patient cases and activities". These patient scenarios are designed to be interactive and "to bring clinical experiences" into the classroom, laboratory setting, and simulation. It is an effective tool to develop charting competency (ehrgo.com, 2021). Because of the variety and multitude of cases, this allows users the ability to select cases that align with course objectives. Faculty can then facilitate learning that supports the objectives of the course.

EHR Go's ease of use makes it a product that is well received by faculty and students. Because the college pays for EHR Go, faculty can create a login and password using their college access. Additionally, faculty with no experience using EHR Go can be invited by other faculty who are using the product without the use of a product representative. Students either have already created an account from previous use or can easily be sent enrollment instructions that include the college's access code (pin). These functions eliminate access barriers and contribute to the ease of use. One virtual instructor reported, "even novice users can pick up the program".

Using EHR Go, virtual clinical assignments were created that mimic patient encounters students have in a clinical facility. From theEHR Go patient encounters, students created concept maps, patient profiles, medication cards, learned about diagnostic procedures and lab values, and completed numerous virtual patient assessments. The students charted patient assessments, medication administration, hourly rounding, and focus nursing notes. This and more was done throughout the virtual clinical day and the virtual clinical instructor has access to view what the student completed within the EHR Go patient chart.One virtual clinical instructor shared "The EHR Go sessions that I could create between myself and a student were very helpful to create a real-life experience."

The support provided to faculty and students byEHR Go staff must be acknowledged. One virtual clinical instructor reported "The EHR Go help team went above & beyond to help students feel heard and understood even when the connection or user was the problem! I heard a few of these interactions via Zoom." It is the authors' opinion that EHR Go is one of the simplest, intuitive, electronic resources that supports learning in a variety of settings. The product was key to creating an innovative virtual clinical experience for students.

Virtual Clinical

Oversight of the virtual clinical make-up program was completed by the simulation coordinator for the School of Nursing. Virtual clinical instructors received three hours of training via Zoom. The focus was on the virtual clinical make-up procedure and how to conduct a virtual clinical day. Resource training consisted of how to use EHR Go, Google Docs, Zoom and the International Nursing Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice - Debriefing. Prior to meeting with the virtual clinical instructors, a Google Spreadsheet was created and shared with the School of Nursing clinical coordinators, program directors, and virtual clinical instructors. This spreadsheet was used to track student absences, assign students virtual clinical instructors, and provided links to Google documents that contained assignment requirements including links to the assigned EHR Go patient(s).

When a student missed clinical, a virtual clinical instructor was assigned to contact the student and set up a mutually agreed upon date and time to complete the missed clinical hours. The program coordinator created EHR Go assignments and associated paperwork that was tailored to meet the missed clinical course student learning outcomes. Throughout the process the virtual clinical instructor kept the program coordinator informed on the progress of the student. Once the missed clinical hours and all paperwork was reviewed, the student's campus and program coordinator were notified.

Typical Virtual Clinical Day:
1. 6:30 a.m.
    a. The student and virtual clinical instructor meet via Zoom
    b. Virtual clinical instructor shares assignment documents with the student.
    c. A 30 minute pre-brief is conducted where the assignment document is explained, paperwork expectations are discussed, questions are answered, and the virtual clinical instructor ensures the student can access the assigned EHR Go patient(s).
2. 7:00 a.m.
    a. The student receives a report from the virtual clinical instructor on the assigned patient(s) using the SBAR format
3. 7:10 a.m.
    a. The student works independently on the EHR Go patient(s) assignment
    b. The virtual clinical instructor monitors the student's progress hourly and provides new information and/or feedback as appropriate
4. 11:00 a.m.
    a. The student provides a SBAR handoff to the virtual clinical instructor prior to breaking for lunch.
5. 11:30 a.m.
    a. The student returns from lunch and receives a SBAR handoff from the virtual clinical instructor.
    b. Updated patient information is given that requires the student to call a provider, do further investigation, and/or document in the EHR Go patient chart.
6. 11:45 a.m.

a. The student resumes working independently to finish the assignment
        b. Hourly rounding continues until designated time for debriefing
    7. Debriefing (approximately 1 hour long)
        a. Discussion of patient assignment(s), prioritization of care, how patient problems were addressed,etc.
        b. If the virtual clinical instructor was working with multiple students during the time frame, debriefing was held with all students simultaneously which allowed for collaborative learning.
    8. All assigned paperwork is due to the virtual clinical instructor at 8a.m. the following day.
        a. Fast turnaround time keeps the student motivated to complete the work during the virtual clinical day and allows adequate time for grading and feedback from the virtual clinical instructor.

Ten additional clinical instructors were provided virtual clinical training as entire clinical groups were quarantined, the clinical site suddenly closed to nursing students, or a clinical instructor had an unexpected conflict. These instructors conducted a total of 11 virtual clinical days using EHR Go with the same make-up format. The training was modified to two hours and consisted of how to complete the virtual clinical day. No additional compensation was provided because this was considered an alternative way of fulfilling their teaching commitment.

Results

From the Google Spreadsheet, the following data was tabulated:

TOTAL MISSED CLINICAL DAYS DUE TO NON ILLNESS	31
TOTAL MISSED CLINICAL DAYS DUE TO ILLNESS	124
TOTAL MISSED CLINICAL DAYS MADE UP USING A VIRTUAL CLINICAL INST	155
TOTAL OF STUDENTS WHO USED A VIRTUAL CLINICAL INST	109
TOTAL NUMBER OF CLINICAL HOURS COMPLETED WITH A VIRTUAL CLINICAL INST	1334.5

Clinical courses chosen for virtual instruction using EHR Go included Fundamentals of Nursing, Medical Surgical Nursing I, II, and III, Mental Health Nursing, Pediatric Nursing, Maternal Child Nursing and Synthesis. Synthesis is the program's capstone course that uses a preceptor model.

Four of the 109 students were required to use the virtual make-up for two different clinical courses. These students accounted for eight make-up days. Of the eight make-up days three were non illness related.

To gather feedback from the participants, upon completion of the virtual clinical day, students were asked to answer a seven-question survey that allowed them to provide any additional feedback. Students were informed the survey was anonymous and were asked to answer all questions truthfully because their feedback would help guide the future of how missed clinical hours would be completed when in person clinical make-up is not an option.

Survey results indicated that the respondents' interactions with the virtual clinical instructors were overwhelmingly positive (Appendix A). Respondents did not provide any negative comments on the survey regarding the virtual clinical instructors. Provided below is a sample of the statements from the respondents.

- "The make-up instructor ... was amazing and very helpful."
- " She was so helpful and made it fun and I learned how to improve my care plans."
- "She thoroughly educated me on what I had to do, I really think she was so amazing and professional."
- "My clinical instructor was very helpful and made my experience fun but yet still educational. She was easy to talk to and get a hold of if I had questions and she was very helpful in every aspect."
- "My clinical instructor was professional and knowledgeable."

The survey results indicated 82% of respondents recommended this method, if in person clinical make-up is not possible (Appendix B). The results for continued use of the EHR Go product was lower (Appendix C); 52.7% indicated they recommended and 29.1% were neutral when asked if the virtual clinical make-up should continue to use EHR Go. However, results indicated 83.8% either recommended or were neutral on the continued use of EHR Go. Additionally, the respondents were asked to rate EHR Go's ease of use on a Likert scale (Appendix D). On the scale 1 indicated "easy" and 5 "very difficult. The average score was 2.4 with 80% of the responses being a 3 or lower. In fact, only 1 repondent rated the product a 5, very difficult.

It is recognized that in the eyes of students a virtual clinical experience does not equate to the learning that occurs at clinical sites. With this in mind, it was important to determine if the participants recognized that learning occurred while completing virtual clinical. Survey respondents were asked to rate their learning experience on a Likert scale with a 1 indicating they learned "Nothing" and a 5 they learned "A Lot" (Appendix E). The average score was 3.58 with 81.81% scoring learning at a 3 or higher.

Using a Likert scale, 1 meaning "Not Enough" and 5 "Too Much", participants were able to score the amount of work required to complete the virtual clinical make-up. 100% of the respondents rated the amount of work a 3 or higher (Appendix F). Most of the narrative comments were about the amount of time and work required to complete the virtual clinical. The following is a sample of student comments:

- Fundamental Student: "The workload was overwhelming for one day of clinical."
- Medical/Surgical I Student: "I understand that a learning experience needs to be made up for missing clinical and I truly feel like I got that within the 7 hours I was on EHR Go. I felt engaged. The rest of the homework (concept map, drug cards, SBAR, patient profile) took time out of valuable studying time."
- Pediatric Student: "The paperwork load is so much, it's very hard to get it all done by 8am the next day."
- Maternal Child Student: "The paper load was way too much."
- Medical/Surgical III Student: "While I did finish and pass the assignment I thought that it was extremely time consuming and stressful."

Given the opportunity to provide feedback resulted in 47.2% of the survey respondents sharing valuable insights into their virtual clinical experience. Here is a small sample of additional respondents' comments.

- "I think the virtual clinical was very informative and not just busy work to take up time which I appreciated. It allowed me to create the bigger picture of the patient in my head and see the connection."
- "I would have had more hands-on experience to complete an extra clinical day at the site, but due to the pandemic it is understandable other measures needed to be taken. The online version can be beneficial to some students. Unless it is an extreme situation, I will not miss clinical rotation."
- "This method was much more interactive and made it easier to learn than last semester's clinical make-up method."
- "Having this program made having my clinical possible. I know it is not real but it still gave me the opportunity to practice nursing and use critical thinking as to what I would do in a real scenario."

Limitations

Although four virtual clinical instructors were contracted for the program, one instructor worked with only two students. This instructor's expertise was maternal child nursing. She was chosen for her expertise but was already contracted for three clinical rotations of maternal child nursing. It quickly became apparent that the additional virtual instructing workload was not doable and withdrew from the role. Several students were assigned to this virtual instructor and were then reassigned. This resulted in three virtual clinical instructors completing 98.7% of the student encounters.

Non-illness reasons for missed clinical hours were not collected. The current School of Nursing policy allowed students to miss and make-up 20% of a clinical rotation. This policy was eased secondary to the pandemic and the need for students to quarantine. The policy did not require students to provide a reason for the absence. This can account for some of the non-illness missed clinical days.

Synthesis students were not expected to use this program but four students completed seven virtual clinical days due to illness. Under normal circumstances, the student would collaborate with the preceptor and schedule an alternative clinical day. Synthesis students routinely work 12 hour shifts that when made up with a virtual clinical instructor is costly.

Out of necessity, time was not taken to seek IRB approval for the project and data collection. However, steps were taken to safeguard the survey respondents' privacy. No email addresses or demographics were collected. Additionally, no data were reviewed or analyzed prior to the end of the semester when students' grades were submitted.

The School of Nursing recognizes and appreciates the additional cost for payment of virtual clinical instructors. The cost for virtual instructor training and compensation for student instruction was approximately $24,000. This additional cost cannot be overlooked. For continued financial support for the program it is anticipated program modifications will need to occur..

Recommendations

Completing missed clinical experiences using a virtual clinical instructor and the EHR Go product was a success. It is recommended that the program be continued for the next academic year. The use of virtual clinical instructors who have clinical expertise was significant in the success of the program. Additionally, the ease of use, accessibility, and comprehensiveness of the EHR Go product allows students to complete the clinical coursework with minimal frustrations. In looking at the program as a whole, there are some changes that will need to occur. Here are a few of our recommendations:

1. With the high number of student clinical absences, including non-illness absences, the School of Nursing recognizes the need for additional limits and consequences for clinical absences. The School of Nursing's student handbook was modified to reflect this. Moving forward, with this modification, a non-illness absence should occur less frequently.
2. Virtual clinical instructors require a graduate degree, significant nursing experience, experience in clinical instruction, and training in the program including debriefing. Virtual instructors require a credit load of three or less credits in order to have adequate time to commit to the program. This is especially true with a limit of 25 hrs of work per week.
3. Based on numerous student comments, the amount of course work in a virtual clinical day may need to be adjusted.
4. Obtain IRB approval for a formal study of the program to determine if a virtual clinical experience using EHR Go and a virtual clinical instructor increases learning and or impacts retention.

Because of the significant cost of the program, the authors propose some minor cost effective adjustments to the program. Instead of the virtual clinical instructor working with 1 student at a time, a virtual clinical instructor would be assigned groups of 4-8 students who would gather virtually together to complete the virtual clinical experience. This would require coordination of dates and times between the multiple campuses. It would be difficult but is essential to ensure that no student would miss a didactic or another clinical course. Virtual clinical instructors compensation would be at 100% of virtual clinical hours instructed. For example, six students from multiple campuses miss eight hours of pediatric clinical. The virtual clinical instructor schedules and facilitates an eight hour clinical day for all six students together. Compensation would be for the eight hours. This would ultimately be a cost savings. Another benefit of this modification is the ability to have multiple participants in the virtual debriefing at the end of the day. The interaction between the students and the virtual clinical instructor would enhance learning. "The evidence is clear that essential learning occurs in the debriefing phase of the simulation-based experience" (INACL 2016, p S21).

Conclusion

Faculty, both didactic and clinical, appreciated having an alternative for student missed clinical hours. Creating a virtual clinical experience using EHR Go and a virtual clinical instructor allowed students to make-up missed clinical hours. It provided a consistent learning experience

that assured learning occurred and course student learning outcomes were met, without additional student costs. With a few modifications and the availability of Covid-19 vaccination, the School of Nursing anticipates a decrease in clinical absences. However, students will continue to experience illnesses and major life events that result in missed clinical experiences. It is essential to continue a standardized method for the make-up of missed clinical hours. It is the authors' recommendation that moving forward missed clinical hours be made-up using the virtual clinical instructor and the EHR Go product.

References

EHR Go. (2021). *Archetype innovations.* Retrieved from

https://ehrgo.com/archetype-innovations/

INACSL Standards Committee (2016, December). *INACSL standards of best practice:*

*SimulationSM debriefing. clinical simulation in nursing,* 12(S), S21-S25.

http://dx.doi.org/10.1016/j.ecns.2016.09.008.

Appendices

Appendix A

My interaction with the virtual instructor was

55 responses

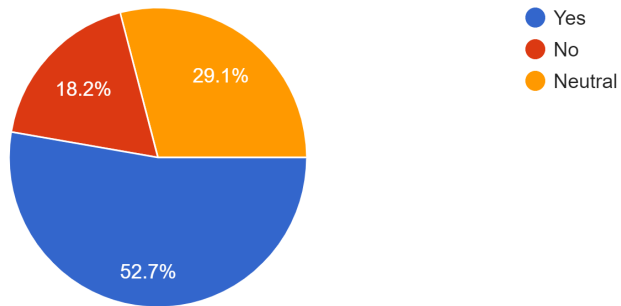- Positive
- Negative
- Neutral: Neither Positive or Negative

94.5%
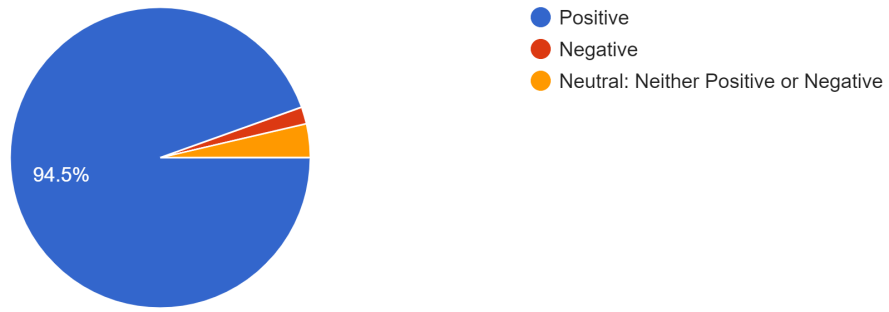
Appendix B

I recommend continuing to use this method to make up missed clinical if in person options are not available

55 responses

- Yes
- No

18.2%

81.8%
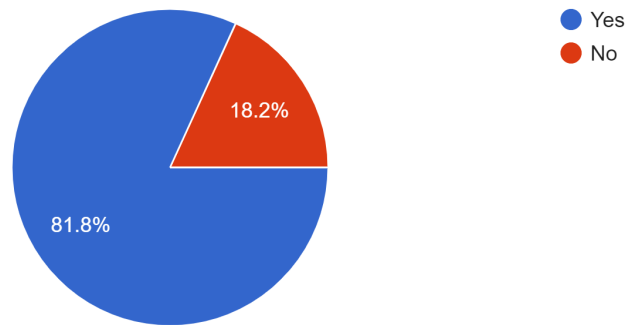
Appendix C

I would recommend continuing to use EHRGo
55 responses

- Yes
- No
- Neutral

52.7%
18.2%
29.1%

Appendix D:

Use of the EHR Go product was 1 = easy - 5 = difficult

Use of the EHRGo product was
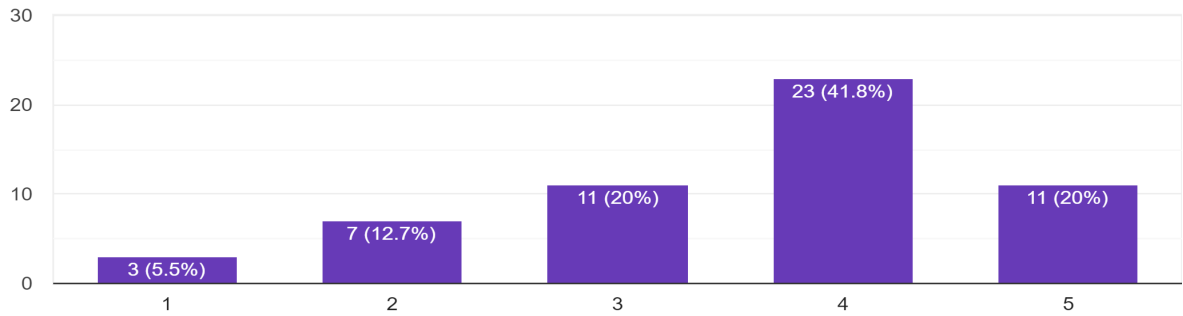55 responses

14 (25.5%) 13 (23.6%) 17 (30.9%) 10 (18.2%) 1 (1.8%)
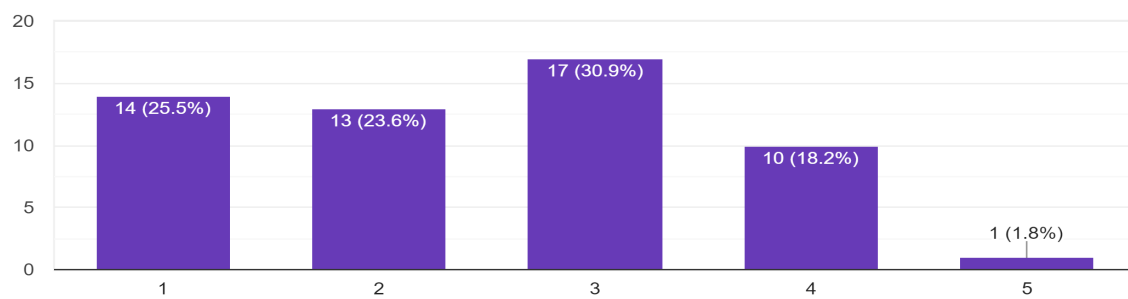
Appendix E:

I learned using this method of instruction 1= Nothing - 5 = Alot

I learned using this method of instruction
55 responses

Appendix F:

The amount of work required to make-up the missed clinical hours was 1= Too Little - 5 = Too Much

The amount of work required to make up the missed clinical hours was
55 responses