

## NOTEL HEALTH SERVICES: A ROLE-PLAYING SIMULATION

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### ABSTRACT

*This paper describes a simulation entitled "Notel Health Services" which integrates cost accounting, tactical operations, strategic planning, and interpersonal skills. This simulation is being used to give physician's assistant majors an opportunity to experience the "business" of delivering health-care services. The Notel Health Services simulation, described in this paper, was designed to help students understand management issues faced by physicians in private practice. Although this simulation uses a medical setting, it would be suitable for any upper-level management class that includes a discussion of professional-services industries.*

### INTRODUCTION

A typical goal of upper division management courses is to help students learn a variety of complex skills. This paper describes a simulation entitled "Notel Health Services" which integrates cost accounting, tactical operations, strategic planning, and interpersonal skills. This simulation is being used to give physician's assistant majors an opportunity to experience the "business" of delivering health-care services. Although this simulation uses a medical setting, it would be suitable for any upper-level management class that includes a discussion of the medical service industry.

This paper is organized as follows. First, a discussion of the use of role-playing as a teaching pedagogy by ABSEL members is presented. A second section describes the "Notel Health Services" simulation in detail. The final section will discuss insights on successfully using the simulation based on classroom experience.

### ROLE PLAY AS ABSEL PEDAGOGY

From ABSEL's inception in 1974, role-playing has received significant attention from ABSEL members. The use of role-play in the 1980s was documented by Lane Kelley and William David Brice (1999). They analyzed the types of pedagogy used by contributors to the proceedings of the annual conferences of the Association for Business Simulation and Experiential and the Journal of Experiential

Learning and Simulation during the period from 1980 through 1989. Of the 206 papers examined, role playing was the most frequently used instruction technique (77 papers). Lane and Brice reported that 37 percent of all experiential papers used role play. Almost forty-seven percent of the organization behavior papers and nineteen percent of the management-focused papers involved role-playing.

Role play, as an interactive pedagogy, has been extremely popular for a variety of reasons. For example, Halsey Jones and John Rogers (1981) used role play as a means of giving students the opportunity to experience the "...frustration and rewards of a very demanding process..." (Jones and Rogers, 1981, p. 142). This opportunity arises because role play can provide the contextual richness necessary for students to experience the social reality. For instance, gender issues were the focus of the management role-play created by John Trinkaus and Alvin Booke (1982). Anne Davis and Eugene Baten (1990) simulated performance appraisal feedback interviews where students could practice holding employee interviews in uncomfortable settings. Jeff W. Totten and John D. Overby (1991) used role play to help students safely experience and react to sexual harassment as a sales-professional. Bruce McAfee and Marian Boscia (2002) used student-generated cases to provide students with insight into the techniques their own firm uses to enhance employee motivation.

Role-play exercises can be an effective means of delivering course content. As G. Robert Greene pointed out: "In live role-play situations, all of the participants (including role players, observers, and the instructor) not only perceive (e.g., see and hear) events as they unfold around them, but they also have an opportunity to actually react to and participate in the events as they occur. In this way, the participants experience the process, rather than just learning about theory related to the process." [Green, 1990, pg. 73]. John Butler (1997) developed a negotiation role-play exercise, "THE JAPANESE ARE COMING", to illustrate log-rolling and bridging agreements and to give examples of personalized and socialized power. He also developed the role-play "AFTER NAFTA" to help students understand the effects of cultural beliefs on negotiation (Butler, 1996 and Masuchun, Wisenbaker, and Butler,

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2000). The Notel Health Services simulation, described in this paper, was designed to help students understand management issues faced by physicians in private practice.

Role play can also provide students with opportunities to improve certain transferable skills, such as problem solving, critical thinking, and oral communication skills. [For a comprehensive review of the literature supporting the effectiveness of role-play activities see the Sage Publication entitled *Role play: Theory and Practice* by Krysia Yardley-Matwiejczuk (1997).] Pettijohn et al. (1990) used multiple evaluators, the professor, student peers, and two other professors to assess whether students' sales effectiveness improved during their participation in a role-playing exercise. Interestingly, while the course professor saw no significant improvement, the peer and outside faculty evaluations showed significant change. Trapp et al. (1995) used a very different strategy to examine the effectiveness of role play pedagogy. These researchers asked upper-level agricultural economics to rate the effectiveness of various teaching methods each of 41 different managerial skills. Four teaching methods -- lectures, case studies, laboratories, and role playing simulation -- were rated by students. Based on their ratings, students clearly preferred role playing simulation, followed by case studies, laboratories and lectures. Role playing simulation had statistically significant higher ratings for 21 of the 41 managerial skills. Notel Health Services requires active use of computational, written communication, problem solving, and oral communication skill.

Shipley and Govahi (2004) pointed out that one clear advantage of using role-playing pedagogy is that it allows students to experience a concrete example of an issue. They are able to explore outcomes of specific strategies to resolve the issue. Students can see what happens. It was the sense of realism that these authors incorporated into their role play simulation Omega Systems, set in the video gaming industry. The authors designed the case to highlight the challenges related to technology companies. The simulation described in this paper also targets a specific industry, medical practice. Similar to Omega Systems, students participating in Notel Health Services will gain concrete office practice experience with issues faced by physicians, mid-level health care providers and non-clinical health care professionals and support staff.

In conclusion, role-playing has been used effectively by ABSEL members for well over the past three decades. Evidence shows that students benefit from this pedagogy and are willing to participate enthusiastically. This form of simulation can be an effective tool for giving students and insight into real world settings. In the next section, this paper describes a medical practice simulation that allows students to experience some of the challenges of managing a medical office practice.

### THE MEDICAL OFFICE PRACTICE MANAGEMENT SIMULATION

In this simulation, students assume the role of a family medical practitioner in an urban setting. Students are to assume that for the past 10 years, with the help of their spouse, each physician has operating a very small practice. The spouse is assumed to be a Certified Public Accountant who handles the billing, accounts receivable and business side of the practice. The initial issue raised in the simulation is whether or not to partner with seven other doctors in hopes of earning more and working fewer hours. The "simulated" practice is formed and students are then presented with a detailed spreadsheet of income and expenses for year 1 and projections for year 2 through 6. Students are introduced to the simulation during the first class sessions of the course. At that time, they are assigned to groups that will complete the simulation over the remaining course sessions. [See appendix 1 the introductory simulation handout.]

### STUDENT JOB ROLES AND TEAM ROLES

During the remainder of the course, each student chooses a "job role" which represents their job in the office such as Physician, Lab Technician, or Business Office Staff person. Each student also joins one of four teams and they provided with team packets that depict their goals and objectives and several key issues which their team is expected to address. In addition to job roles, students also "chooses" to participate on one and only one team. The four team roles are: Financials/Work Design, Office Flow and Throughput, and Marketing Team; Personnel Team; Planning (Long Range), Mission and Vision, Quality of Care Team; and Medical Records/Information Systems Team. The students of each team are encouraged to act out each team scenario as the overall medical practice scenario progresses from week to week.

The Financials/Work Design, Office Flow and Throughput, and Marketing Team examine how all proposals by each of the other three teams affect the good of the "Notel Health Services Medical Practice" as a whole. This team uses the original spreadsheet provided by the Faculty instructor to track costs and revenues associated with daily practice, compute return on investment, and determined practice earnings for the year. The Personnel Team is responsible for adjusting staff size based on changes in practice operations proposed by other teams. For example the information systems / medical records team recommended the addition of at least two staff members, one person who specializes in software applications and another person who can maintain hardware such as PCs networks and wireless devices.

The Personnel Team and then the Finance team in that order will have to approve the addition of these two staff before the computer services staff change is made in the

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official spreadsheet. The Personnel Team has also recommended the hiring of higher-level disease management specialist. Other staffing changes can result from an analysis of workflow design. The personnel team also addresses salary and benefits issues. Planning (Long Range), Mission and Vision, Quality of Care Team is charged with creating mission and vision statements for Notel Health Services. This team must also define what additional services should be offered over the next five years. Finally this team is expected to develop a system of checks and balances that will ensure that quality service is being provided. The final team, Medical Records/Information Systems Team, must develop a plan for expansion of the medical records information system. This system must be both effective and cost efficient.

The students are given team and job role assignments to heighten the interaction. The key interaction tool is an Excel-based financial spreadsheet and analysis which covers the past year and projected revenues and expenses for the next 5 years. Each team is told to meet and suggest changes to be made from their team's point of view and they are strongly encouraged by the instructor to detail the costs of their changes and submit same to the Finance Team who will approve or disapprove the suggested change. All approved changes created the next version of the financial spreadsheet and costs are projected out 5 years as before. The Physician Board settles disputes by physician vote, majority rule.

### DECISIONS MADE BY STUDENTS DURING THE SIMULATION

During the fourth week of classes each of the teams is required to submit a team homework assignment in which they detail their team's planned changes for Notel Health Services. Each team then has to present the suggested planned changes in an initial student presentation. Each team presentation lasts 10 minutes with an additional 5 minutes for questioning presenters. Fellow students and the faculty member rate each team's presentation. Rating forms are collected by the faculty member and used in course grading—with weighting of 30% for students and 70% for faculty. The peer pressure and the grading heighten the involvement and make the simulation more real since the student have to be ready to respond to a wide variety of questions about Notel Health Services and the suggested changes and short and long term impact of each. The student are also required to make a final graded presentation at the end of the semester detailing the changes that were implemented and the financial and operation impact each had upon Notel Health Services.

Throughout the course of the semester the students are expected to change the number and types of staff working in the Notel Health Services practice and also specify what each new or changed person does with his or her time while working at Notel Health Services. Teams are also expected and encouraged to suggest purchase and implementation of

new equipment, suggest contracts to be negotiated with health insurance companies and HMOs and governmental organizations such as Medicare and Medicaid as well as state and local health and insurance departments. Teams are also cautioned by the faculty member in open class to consider the legality of the changes and that the state and federal IRS is watching and Notel staff may go to jail if they are accused and found guilty of fraud or malpractice.

The chapters in the text and the assigned readings are presented in the context of the simulation and the team projects. All assignments are related to team and job roles. Students are strongly encouraged to relate their assignment reports to their team and role-playing activities. The students use the text and reading to justify and support suggested changes to the Notel Health Practice operations.

### CONCLUSIONS AND INSIGHTS

The students gain by being required to use the text-based knowledge in the context of a "simulated real life" operating medical practice. Students' own initiative, interaction with their team, and peer pressure from classmates push them to get involved and make it real. The question-and-answer sessions following team presentations force the evaluation of the feasibility of each management decision. As teams try to justify their suggested changes, they rely on the Text and faculty presentations as "authorities" further maintaining and reinforcing the link to the subject material being presented. Eventually, students understand that a medical practice of 32 people is dynamic and ever changing and the provision of quality care is only one of the keys to a successful medical practice, efficient operations and financial soundness being the other keys.

Students are encouraged, through group/team pressure, to confront moral, ethical, financial and emotional issues that are addressed daily in real life medical office practices. They realize as a result of the experience that "cut and dry" issues such as firing a few staff members are not "cut and dry" and shouldn't be so. Students through team questioning and the competition are forced to deal with the consequences of their decision in a stressful but controlled setting.

One final note, students who participate in the Notel Health Services simulation have the opportunity to explore careers related in health care provision such as management, financial analysis and leadership. For most physician-assistant students who have been studying their clinical discipline for 3 to 4 years, this is a new and welcomed experience.

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### APPENDIX I

#### THE INTRODUCTORY SIMULATION HANDOUT: FAMILY PRACTITIONER LOOKING TO EXPAND HER PRACTICE

Suppose you are Connie Jones MD, a 35 year old family practitioner in the Wilkes-Barre, PA area. For the past 10 years you and your spouse have operated your practice out of a side room you had built onto your home. Your spouse George Jones is a 35 year old Certified Public Accountant (CPA) and he has handled the billing, accounts receivable and business side of the practice. You enjoy your practice but you find yourself doing everything and working about 60 hours per week. Your spouse is working the same amount of hours and both of you would like to spend more time in leisure activities and less time performing the mundane activities of the practice such as hiring and firing and supervising support staff. You earn \$125,000 per year and collectively you both make \$200,000. On the 19th hole after a Wednesday golf match you have discussed expanding your practice and or going into partnership with several of the other doctors. Your practice panel is full and you are constantly turning away referrals so you reason that you could easily add another MD to your practice and still not lose money. The other doctors have expressed similar referral experiences. What if George, Don and Sara and Alicia, Derek, Connie, Bob and I went together in a practice? Since we are all making money in our individual practices, can we make more money together as one larger practice.

### APPENDIX II

#### CREATING THE ROLES FOR ALL STUDENTS AND THE PERSONAL INTERACTION

One year later- The new practice is established as Notel Health Services. All 7 MD's and the CPA decide to merge their practices and retain all 24 employees. All of the 8 professionals are making about the same amount of money (\$125,000) that they were making before the merger but they are working about 8 hours less per week. Collectively they feel they should be able to make about \$200,000 each and reduce their hours to fewer than 50 hours per week. They have a meeting of the 8 partners and talk over the past years experience. Several problems are identified:(a) Patient visits consume a significant amount of MD and support staff time (b) There is too much down time in which MD's are idle followed by times when each MD is triple booked and significantly overworked. (c) There is a general feeling that the practice could handle 20% more patients but maybe they should advertise more and expand their practice geographical area. In the scenario, the Partners hold a second meeting and decide to form four teams to address the above problems:

- Financials/Work Design, Office Flow and Throughput & Marketing Team
- Personnel Team
- Planning (Long Range), Mission and Vision, Quality of Care Team.
- Medical Records/Information Systems Team

On the first day of classes PA students are presented with the above documents and team role playing and operational guidelines( goals, trends, and expectations). Each student is required to choose a job role and then to join a one of the four teams above. They each receive a financial Excel based spreadsheet, which is an abbreviated profit and loss statement for year 1 and projected costs, revenues and earnings for years 2 through 6. The spreadsheet (the simulation tool) is provided in hardcopy and via email file since each of the teams is expected to make changes to the spreadsheet throughout the semester.