

EDITORIAL

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How to Make Life and Death Medical Decisions? On the Occasion of Play/Drama as Health Care Protection Method of Decision Making Using by Patients of Pancreatic Cancer

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In December of 2022 as a supplement of the International Journal on Bio-medicine and Healthcare (IJBH - www.ijbh.org) (1). Academician Professor Benjamin Djulbegovic published a Play/Drama, as a novel approach to medical education and health promotion. There are not many articles in scientific literature published in this way. The drama is based on the real life encounters, illustrating the role of uncertainty that colors all medical decision.

The science and philosophy of uncertainty have been a professional interest of Professor Djulbegovic for most of his professional life. But, as the author pointed out, he wrote this drama/play with his hope "that converting the scientific, philosophical, and technical writings into this play may help disseminate these ideas better to benefit the public than all other hundreds of scientific articles the author has written on the topic" (1).

This approach is original, fascinating educational approach that could and should be used by undergraduate and postgraduate students and faculty in humanities disciplines, including those in medical schools. These students are required to read many dense scientific, philosophical, and technical writings (many of which are referenced/annotated in the Endnotes of the paper (1). The play provides an exceptional teaching guide to more than 30 scientific, ethical, and philosophical concepts skilfully woven within the playwright format. Both seasoned and young physicians will understand better the ethical and scientific implications of technical and philosophical aspects of the science of uncertainty that they may not even be aware govern their professional interactions with their patients on daily basis.

The audience for this play also includes all people who are touched by cancer - patients, their loved ones, healers, or policy-makers - literally millions of people (as cancer is the second leading cause of death in the US). The content of the drama is particularly beneficial to ordinary people and persons with pancreatic cancer. Of course, once the play is published, one would like to see it enacted in theaters all around the country or even adapted for the movie.

It has been said that science is about articulating and responding to uncertainties. In clinical medicine, these uncertainties typically revolve around diagnosis, prognosis, and treatment (2-4).

The author stated: "The science of uncertainty has tremendously advanced during the last couple hundred years, particularly during the previous 20 to 30 years (1). This has allowed ever better descriptions, explanations, and predictions of the effect of disease and treatment in group and individual patients alike. But uncertainty is theoretically impossible to eliminate. This creates enormous scientific and ethical problems for all our patients - what should the physicians and patients working together do when they face uncertainty, particularly life-threatening events? What is the most rational and ethical way to treat people facing life-and-death decisions? How do we exactly communicate these inevitable uncertainties that all of us will sooner or later face? Building on decades of the science of uncertainty",

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Benjamin Djulbegovic – *An Impossible Decision—the Life Interrupted by Uncertainty*, a play, drama in two acts

An Impossible Decision—the Life Interrupted by Uncertainty

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The play tries to describe making important—life & death—medical decisions under uncertainty. While the overarching goal is to arrive at the most optimal, rational solution, the process of decision-making inherently involves human interactions – here between the patient, her husband, the doctor—fraught with emotions and navigated within immediate familiar and larger social and medical settings in the attempt to provide best possible and compassionate help to a human being afflicted with a life-threatening disease. The play revolves around the optimal choice of treatment for metastatic pancreatic cancer that a young 45-year-old woman and her family face: from not being treated to standard treatment to enrollment in various experimental studies. By covering most scientific concepts using dialogues between the real-life protagonists, the play attempts to show—and educate the broader public—how scientific progress is inevitably made because individuals (“made of flesh and blood”) have consented to participate in medical research while searching for the best solution for them as individuals. It uses a real-life example to answer an elusive ethical “triple aim”—arriving at a decision that respects the right of a person to decide as an autonomous human being, has the best possible chances to personally benefit from the treatments under consideration while contributing to knowledge that can help others in the future.

Act 1: uncertainty about the diagnosis. Act 1, Scene 2: uncertainty about treatment (doctor's office, after biopsy). Act 2, 1: uncertainty about treatment (discussion at home). Act 2, 2: decision. The annotations (endnotes) provide further explanations of the theoretical and philosophical concepts that were converted into the real-life drama of a patient facing a life-threatening disease. It attempts to demonstrate the central role of uncertainty that shape these decisions calling on science to help address them. The main goal of the play is to illustrate the applicability of many theoretical concepts of the science of uncertainty to real-life decision-making to show that they do matter to all of us individually and collectively. The author hopes that by converting the scientific, philosophical, and technical writings into this play, the public would benefit more from this text than hundreds of other scientific articles he has written on the topic.

Keywords: Life Interrupted by Uncertainty, real-life decision making, play/drama.

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Dr Djulbegovic has converted a huge amount of literature into a Socrates dialogue and playwright format to show how the seemingly esoteric multiple theoretical concepts have relevant, real-life implications. The result is a unique text (*An Impossible Decision – the Life Interrupted by Uncertainty*), presented as a drama in two acts where the main protagonist- Lisa, a 45 woman who suddenly finds her life interrupted by pancreatic cancer – has to navigate all unknowns in the face of life-threatening disease.

We have published many medical and technical papers in this journal offering various mathematical and statistical insights on handling medical uncertainties. However, none of these papers shows real-life relevance to patients often left alone to make these difficult decisions. This is the reason that we decided to publish this text, which brilliantly bridges science with ethics to offer a solution to the ever-elusive “triple ethical aim”- arriving at a decision that respects the right of a person to decide as an autonomous human being, has the best possible chances to personally benefit from the treatments under consideration, while contributing to knowledge that can help others in the future.

By publishing this text in one biomedical journal like International Journal on Biomedicine and Healthcare, Editors hope to reach a much wider audience than is possible using technical, scientific papers. In particular, the aim is to educate the public on how medical advances are made and how inferences and evidence are generated and appraised – in the best tradition of

evidence-based medicine (EBM) while highlighting uncertainties and inevitable trade-offs that accompany science, policies, and personal choices in the attempt to arrive at most satisfactory decisions (5, 6).

Written by Benjamin Djulbegovic, one of the Top Cancer Doctors who has worked in America's leading cancer institutions specializing in Evidence-Based Medicine and Oncology and who has written hundreds of scientific articles on the topics of uncertainty, evidence-based medicine, and rational clinical management, this play converts the seemingly distant theoretical concepts into the real-life meanings, presented in the form of a dialog describing a somewhat idealized version of thousands encounters the author has had with his patients over the years (7-18).

So, this is as real as it gets – these discussions did happen, although not necessarily with one patient only - time-constraint of the real encounter would often intervene, as well as different backgrounds of the patient and the family/friends that would accompany the patients resulting in a shorter version of the encounter than it may have been presented here but always fraught with uncertainties, typically along with the lines described in the play (1). The play revolves around uncertainties about diagnosis, prognosis, and treatment.

While the universal principles described in the play apply to all settings and jurisdictions, specific details about treatment and regulatory perspectives are based on the US experience. The latter can be easily modified to other localities as needed. The main characters in the

play are assumed to have a high educational level so that they can engage in discussion with their doctor about often complex concepts that many people find hard to understand.

However, whether the patients can grasp these concepts or not, the dilemmas presented in the play cannot be avoided (1). The same goes for the potential audience. Metastatic pancreatic cancer was selected because at the time of this writing (2022) this represents one of the most deadly diseases with realistically no well-established treatment options that clearly should be favored over others.

As science advances, the treatment and assessment of benefits and harms will have to be modified (19), but the issues that need to be addressed will remain identical. The issues discussed in the play apply to all medical situations, even when the stakes do not appear high. As medical science finds its way to cure pancreatic cancer eventually, the future updates of the play may require adaptation to different medical problems. The issue of decision-making under uncertainty will remain inherent in clinical medicine (as indeed is the case for most life decisions).

By publishing this text, we at the Medical Archives join Dr. Djulbegovic in his desire to reach a much wider audience than possible using technical, scientific papers. In particular, the aim was to educate the public on how medical advances are made and how inferences and evidence are generated and appraised – in the best tradition of Evidence-Based Medicine while highlighting uncertainties and inevitable trade-offs that accompany science, policies, and personal choices in the attempt to arrive at most satisfactory decisions (1, 3). The play provides an exceptional teaching tool to show how to apply these concepts to decisions relevant to all of us and what shared decision-making entails. We also encourage the theaters and movie producers to enact the play on the stages anywhere in the world and/ or adapt it for the movie.

To the best of my knowledge and editing experience, this is the first article attempting to use this format to seek the convergence between the natural sciences and humanities in the great tradition of the search for Consilience-the unity of knowledge. We hope other publishers and journals will follow suit.

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