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A celebration of Steven Gabbe's contributions and accomplishments: Associate Editor, *American Journal of Obstetrics and Gynecology* 1990-2010

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After twenty years as an Associate Editor of the *American Journal of Obstetrics and Gynecology* (1990-2010), Dr. Steven Gabbe stepped down to focus on his current position as Chief Executive Officer of the Ohio State University Medical Center and Senior Vice President for Health Sciences at the Ohio State University. Earlier this year, the Editors of the Journal decided to celebrate Steve's professional and academic accomplishments. This article highlights Steve's exceptional contributions to Obstetrics and Gynecology, medicine and the institutions he has led.

Steve's decision to pursue a career in medicine was made at the age of 10, when he witnessed the care provided to his grandmother (affected by cancer) by a family physician. Steve recognized the human value of medicine and admired the respect in which physicians were held by patients and their families. He knew then that medicine was his calling. Steve attended a local suburban high school in Newark, New Jersey and was subsequently admitted to Princeton, where he earned a Bachelor of Arts, *magna cum laude*.

Medical School and his Diagnosis of Diabetes Mellitus

Steve graduated Alpha Omega Alpha from Cornell University Medical College. During his last year of medical school, he went to the infirmary because he was not feeling well and suspected that he may have diabetes. The physician told him that he was probably studying the chapter on diabetes that week, asked him not to worry but ordered some laboratory tests just in case. Later that day, Steve was told that his self-diagnosis was correct – he had diabetes. He began treatment with a sulfonylurea, but soon required insulin.

Upon his impending move to Boston to pursue research and Obstetrics and Gynecology, he was referred to a famous endocrinologist at Massachusetts General Hospital, who told him that patients with diabetes were too difficult, and that he limited such patients in his practice for his own sanity. He told Steve that since he was going to be at the Boston Hospital for

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Women, he would recommend Dr. Priscilla White. This not only made a difference in Steve's life and health¹, but also for our discipline, because it was at that time when Steve decided to focus his intellect on the problem of diabetes in pregnancy.

Internship, post-Doctoral Fellowship and Residency: when and where

When Steve interviewed at Harvard for a Residency position, Dr. Duncan Reid, Chair of the Department of Obstetrics and Gynecology, told him that he was clearly interested in Steve's becoming a resident, but as was common at the time, Steve would have to wait his turn to enter the program. Dr. Reid recommended that, in the meantime, Steve begin laboratory research in biological chemistry at Harvard under the mentorship of Professor Claude Alvin Villee, Jr., who was a towering figure in endocrinology. Two of Steve's first papers focused on the metabolism of progesterone and pregnenolone by the placenta, and were published in the *American Journal of Obstetrics and Gynecology*^{2,3}. Steve's work in the placenta, first in endocrinology and subsequently in carbohydrate metabolism, was influenced by Dr. Villee, who considered that the human placenta was a neglected organ in endocrinology.

After completing his work in biological chemistry, Steve entered the Residency program in Obstetrics and Gynecology at the Boston Hospital for Women (1972-1975), and subsequently, joined the faculty of the University of Southern California - Los Angeles County Hospital (1975-1977). Among his colleagues were Dr. Edward Quilligan, Dr. Jorge Mestman, Dr. Roger Freeman, Dr. Uwe Goebelsmann, Dr. David Nochimson, Dr. Curt Cetrulo and Dr. Richard Lowensohn. At this time, his interest in carbohydrate intolerance during pregnancy was well-established. Steve wrote a classic review of fetal carbohydrate metabolism and its clinical importance with Edward Quilligan⁴, and made a number of pioneering contributions to the understanding of diabetes in pregnancy.

Steve moved to Denver to join the faculty at the University of Colorado. Following this, he joined the faculty at the University of Pennsylvania, became Chairman of the Ohio State University College of Medicine Department of Obstetrics and Gynecology, and subsequently joined the University of Washington in Seattle before being appointed Dean of the School of Medicine at Vanderbilt University. Steve was delighted to then return to the Ohio State campus, as CEO of the Medical Center and Senior Vice President for Health Sciences.

When I asked Steve about what he considered his most important contributions, he referred me to a paper published in the *American Journal of Obstetrics and Gynecology* – a retrospective study in which he and his co-authors demonstrated that the rate of fetal death of patients with gestational diabetes in good control was no different than that of patients without the disease. This observation was seminal, as it argued that with “tight control”, patients with gestational diabetes could be allowed to reach term without the fear of stillbirth on the account of carbohydrate intolerance⁵. Steve highlighted a second study of patients with class B-R diabetes mellitus in which metabolic control, monitoring with contraction stress tests and urinary estriol levels, and timely delivery were shown to improve the pregnancy outcome of such patients⁶. Both studies were done at USC.

In another set of studies, Steve systematically examined the value of fetal lung maturity tests in the amniotic fluid⁷.to predict the occurrence of respiratory distress syndrome (RDS)⁸. which was a vexing problem in timing the delivery of pregnant patients with diabetes.

Diabetes in Pregnancy

Over the course of his career, Steve has investigated the most pressing question of diabetes in pregnancy, including the outcomes of pregnant patients with heart disease (class H diabetes)⁹. diabetic nephropathy (class F diabetes)¹⁰. the diagnosis of congenital anomalies in pregnant mothers with diabetes mellitus^{11,12}. the screening for gestational diabetes mellitus¹³. evaluation of sonographic soft tissue in fetuses of mothers with GDM¹⁴. the methods of fetal surveillance in patients with insulin-dependent diabetes¹⁵. the use of the insulin pump^{16,17}.and birth outcomes about American Indian/Alaskan native women¹⁸. Steve became a founding member of the Diabetes in Pregnancy Study Group of North America, and summarized, in a series of articles, the unsolved challenges of diabetes in pregnancy¹⁹⁻²¹. The book Diabetes in Women: Adolescence, Pregnancy and Menopause²². edited by E. Albert Reece, Donald Coustan and Steven Gabbe, has become a standard reference in the field, and is a comprehensive treatise on the subject.

A sabbatical in the United Kingdom

Steve took a six-month sabbatical at King's College Hospital in London, where he had the opportunity to perform ultrasound examinations, hone his skills in prenatal diagnosis and work closely with Professors Stuart Campbell and Kypros Nicolaides. From that journey came important contributions such as the identification of the “banana and lemon” sign for the detection of neural tube defects²³. When Steve returned to the United States, he implemented ultrasound training as part of the standard education of fellows in Maternal-Fetal Medicine and residents.

Appointment as Associate Editor of the American Journal of Obstetrics and Gynecology

In 1990, Steve became Professor and Chair at the Ohio State University, following Frederick Zuspan, an Editor-in-Chief in the *American Journal of Obstetrics and Gynecology*, in that position. At that time, Edward Quilligan and Frederick Zuspan asked Steve and Alberto Manetta to join the *Journal* as Associate Editors. Steve had experience with the editorial process early in life, given his longstanding interest in athletics and previous experience as an editor of sports news. Steve found time during his position as Chair at Ohio State University and Washington, and as Dean at Vanderbilt University to serve as Associate Editor.

Steve processed a high number of manuscripts, participated in policy decisions of the *Journal* and worked with Professor Larry Longo of Loma Linda University to strengthen a section of the *Journal* focused on “Classic Pages” in obstetrics and gynecology. Under such heading, papers like “My life with progesterone”²⁴.were published in the *American Journal of Obstetrics and Gynecology*. Other papers that Steve selected for the section included

“Diagnosis of the respiratory distress syndrome by amniocentesis”²⁵.— in this article by Louis Gluck et al., the use of the L/S ratio as a clinical test was first proposed, and it was suggested that an L/S ratio of more than 2.0 should be considered to be indicative of fetal lung maturity. Other papers featured as “Classic Pages” in obstetrics and gynecology included “Clinical experience with the oxytocin challenge test”²⁶, “Endocrine function of the human fetoplacental unit”²⁷, which described the metabolism of steroids in the mother, placenta and fetus, the “Amniography. Preliminary report”²⁸, and “Steroids LIV. Synthesis of 19-nor-17 α -ethynyltestosterone and 19-nor-17 α -methyltestosterone”²⁹.

Steve mentored other Editors and played an essential role in attracting high quality manuscripts to the Journal, supporting the publication of innovative science, and was a liaison between the *Journal* and the American Gynecological and Obstetrical Society. Steve also endorsed the change of the new format of the Journal in its opening Editorial³⁰, as well as in press releases.

Steve as an academic leader and mentor

During his tenure as President of the American Gynecological and Obstetrical Society, Steve presented a fascinating study about the “Burnout in Chairs of Obstetrics and Gynecology Departments: Diagnosis, Treatment and Prevention”³¹. He found that, among other things, a supportive family prevents burnout – a message that he has incorporated into the culture of the organizations he leads. The subject was then researched for generalist and specialist physicians³². Steve's concern with trainees led him to study the impact of duty hours among pregnant residents in Obstetrics and Gynecology³³, and its relationship to pregnancy outcome. He also recognized the potential importance of mentorship to prevent burnout, and performed a year-long prospective randomized clinical trial in which new Chairs of Obstetrics and Gynecology Departments were randomly allocated to be mentored by individuals considered to have been successful Chairs for 5 years (long distance mentors) versus a control group who had selected their own mentors at their local institution. Those mentored by local individuals appeared to do better than those who were mentored through a long-distance process³⁴. The *Journal* has recognized the importance of mentorship in our discipline by publishing original papers and Editorials³⁵⁻³⁸.

Steve and Pat: an inspiring partnership

Steve married Patricia Temple, a pediatrician with a keen interest in pregnancy outcomes and preterm birth, nearly 30 years ago. They have four children: Adam, Erica, Amanda, and Daniel; and two grandchildren: Alexander and Marin. Steve and Pat have been strong partners in building academic strength in the institutions in which they have served together. Pat told me that even when overwhelmed with work, Steve finds time to be present at family functions or when one of the children had a presentation or special event. Steve and Pat have earned the admiration and respect of not only their professional colleagues, but of the communities where they have lived.

Hard work and discipline

An early riser, Steve gets up at 4am, exercises 30 minutes and gets to work by 5am. He spends 2-3 hours preparing for the day, and currently chairs 8-10 meetings per day. At the end of his day in the office, he meets Pat and generally has dinner with distinguished guests, participates in fundraising events or performs community service. Over the weekend, he works 6-8 hours per day, editing, catching up or working on Obstetrics: Normal and Problem Pregnancies³⁹ (edited with his Cornell graduates, Drs. Jennifer Niebyl and Joe Leigh Simpson). Steve enjoys sharing time with Pat and his family, riding their tandem bicycle, watching sports and movies, and listening to music.

When asked about his secret of success, Steve responded “hard work and discipline!” However, those of us who know Steve believe that this is only part of the story, because a keen intellect, wisdom, fairness, vision and insight are also part of his exceptional success.

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On behalf of the Editors of the *American Journal of Obstetrics and Gynecology*, our publisher, Elsevier, the authors, reviewers and readership of the Journal, I would like to express our sincere gratitude to Steve for his inspired leadership, contributions, mentorship and friendship.

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