Surfing the waves of change in reproductive medicine: past, present and future. A presentation of the 2014 ASRM Strategic Plan

Richard H. Reindollar, M.D.

American Society for Reproductive Medicine, Birmingham, Alabama

A presentation at the Opening Ceremony of the ASRM Seventieth Annual Meeting reviews advances in reproductive medicine and presents an overview of the 2014 Strategic Plan: "Global Impact Through Dynamic Engagement." (Fertil Steril® 2015;103:35–8. ©2015 by American Society for Reproductive Medicine.)

Discuss: You can discuss this article with its authors and with other ASRM members at http://fertstertforum.com/reindollarr-2014-asrm-strategic-plan/

Use your smartphone to scan this QR code and connect to the discussion forum for this article now.*

* Download a free QR code scanner by searching for "QR scanner" in your smartphone's app store or app marketplace.

Surfing the Waves of Change in Reproductive Medicine—this has been our tag line for this meeting and was the tag line I adopted for the year when taking over the presidency last October. When elected, I never dreamed that my presidency would be all of 2 months or that it would be interrupted by becoming Executive Director for the Society. What a privilege it has been to begin as president and now to serve as your Executive Director.

These truly are exciting times in reproductive medicine, with enormous changes: changes in our science, changes in our clinical care, and, as you will find, changes in the direction of our organization. The changes in routine infertility care have been unimaginable during my career, having started my fellowship shortly after Louise Brown was born, but some of the most dramatic changes have involved disorders of reproduction in patients whom we previously thought were not just infertile but in fact sterile. Let's think about the care (or absence of care) and the reproductive options not available for some of those patients at the time they were first described.

Let's consider: the care of women with vaginal agenesis before the first description in newborns by Meyer in 1829; the lack of knowledge about congenital adrenal hyperplasia before 1865, when the Italian pathologist DeChriccio discovered at autopsy the unexpected finding of a vagina, uterus, fallopian tubes, and ovaries in a phenotypic male who also had enormous adrenal glands; the care of patients subsequently labeled with polycystic ovary syndrome in 1935, when Stein and Leventhal described the combination of amenorrhea, hirsutism, and obesity and the establishment of menses after ovarian biopsy, no earlier treatments having been successful; the phenotypic female patients with amenorrhea found in 1937 to have testes and androgen insensitivity, as first described by Petterson; or the patients described in 1938 by Henry Turner as having a syndrome of sexual infantilism, congenital webbed neck, and cubitus valgus; the phenotypic male patients first labeled in 1942 with a syndrome named after the physician at Massachusetts General Hospital who made the earliest reports, Harry Klinefelter; the patients reported in 1943 by Hurxthall, with hypogonadotropic hypogonadism, and a year later a subset with anosmia called Kallmann syndrome; and those women who, in 1969, were identified by Georgiana Jones, the mother of our subspecialty and one of our most noted past presidents, with a new syndrome of elevated FSH levels associated with normal ovarian architecture and gonadotropin resistance.

At the time of these earliest reports, we knew the physical findings only,

Received November 13, 2014; accepted November 13, 2014.
R.H.R. has nothing to disclose.
Reprint requests: Richard H. Reindollar, M.D., Executive Director, American Society for Reproductive Medicine, 1209 Montgomery Highway, Birmingham, Alabama 35216 (E-mail: tracy.w.haines@hitchcock.org).

Fertility and Sterility® Vol. 103, No. 1, January 2015 0015-0282/$36.00

http://dx.doi.org/10.1016/j.fertnstert.2014.11.019

and later the hormonal profiles, but we did not know the causes at the cellular level. We knew that most of these individuals had no chance for pregnancy. We have now gone on to the molecular age and know the specific mutations or chromosome abnormalities causing many of these disorders, and we have reproductive technologies available for most to assist in family building.

The times have continued to change, perhaps even more dramatically in recent years, as some amazing waves have been surfed and hurdles overcome. To list a couple important discoveries in recent times by ASRM members:

1. Human embryonic stem cells have been successfully developed from taking the nuclei of skin cells and placing them into oocytes that can develop into any number of tissues for the potential treatment of diseases such as diabetes and perhaps Lou Gehrig syndrome.
2. The ovaries from women with premature menopause, essentially devoid of oocytes and the few remaining eggs unresponsive to gonadotropins, have been removed, minced into small pieces, and treated with solutions involved in what is called the Hippo cellular pathway. Once placed back into the pelvis, follicular growth has been activated for egg retrieval and successful IVF.

In the clinical practice of assisted reproductive technology (ART) our care is also rolling forward. Here are some striking examples:

1. We've seen the perfection and utilization of molecular technology for preimplantation genetic screening (PGS) and improved pregnancy rates.
2. There has been an emerging sense that the highest success rates may come from freeze-all IVF cycles and that the pregnancies produced may have lower rates of complications involving abnormal placentation.
3. The idea that we can use IVF to cure mitochondrial disease is incredible.
4. We will hear this week about the use of vaginal incubation for fertilization and development of embryos to blastocyst stage and successful pregnancies.
5. We will also hear an abstract of the rebirth of an old technique: ovarian stimulation, insemination, and then lavage from the uterus of blastocysts for preimplantation genetic diagnosis (PGD)/PGS and later thaw cycles. Is it IVF without retrieval, or perhaps PGD/PGS without IVF?
6. Who would have dreamed that we would be hearing a lecture on successful uterine transplantation with a live birth, a procedure that is especially important in those countries where gestational carriers are banned? My guess is that Meyer never imagined this possibility in 1829 when he first described the syndrome of vaginal agenesis.

Truly we are surfing the waves of change!

Now, I'd like us all to think for a few moments about the future in reproductive medicine and the role that ASRM could have in leading big change. I'd like us to imagine what that future might look like.

Let's imagine:

A future where the ASRM puts into place the most sophisticated cutting-edge information technologies to pass on information seamlessly to you or groups of learners live or on your own time.

A future where you can tune into an ASRM Grand Rounds on a regular basis and hear the experts in a given area share the latest information and then can ask questions during the live online presentation.

A future where we have new ways to learn during our busy schedules. We have an ASRM smartphone app that is loaded with a library of short videos—5–10 minutes each, with one to four take-home points—that will allow us to learn while waiting for our next case in the operating room, while sitting at the gate for our next flight, or while waiting for our significant other or child at the mall.

A future where our patient's frustrations are reduced by having similar ASRM apps with short videos that answer their burning questions with ease.

A future that allows any of you to easily volunteer and become active in the organization in any of our missions—education, research, advocacy, development.

A future where we identify gaps in knowledge, when the care we provide in a given area is not supported sufficiently by outcome data and we enlist you in your practices to participate in studies to answer the important questions raised.

A future that provides treatments for the 75% of our infertile couples who currently can not afford all of the care available to them.

A future where we have taken what we have learned to a much bigger scale well beyond our borders to have a global impact.

A future where our message has been so loud and so clear for so long that the reproductive rights of couples are never questioned again.

In April, during the last days of the snow season, the ASRM completed nearly 15 months of preparation with a day-and-a-half-long Strategic Planning Session in Woodstock, Vermont. The purpose of strategic planning is not only to assess the strengths and weaknesses of an organization, but also to imagine a future bigger than us all and to plan a strategy that will get us there.

At the start of our strategic planning day, we were all asked to imagine where we would like the ASRM to go in the future and what care would look like if we were able to stretch our goals to the maximum. You have just heard some of the ideas that were generated by those imaginary thoughts. At the conclusion of the Strategic Planning process we focused the new plan on seven areas: communications, continuous professional development, impacting reproductive care, research, engaging the profession, global outreach, and organizational stability.

We entitled this plan: "Global Impact Through Dynamic Engagement," because the overriding themes throughout our plan are: to bring value to our ASRM members; to have measureable impact on the reproductive care of our patients that can spread worldwide, and to have a fully engaged