

medicine when combined with the infrastructure principals described in your article become the medical home concept. So although the high-tech documentation of care may be new, the basic concept of the medical home is not.

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## Reference

1. Rogers JC. The patient-centered medical home movement—promise and peril for family medicine. *J Am Board Fam Med* 2008;21:370–4.

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The above letter was referred to the author of the article in question, who offers the following reply.

## Reponse: Re: The Patient-Centered Medical Home Movement – Promise and Peril for Family Medicine

*To the Editor:* I was pleased to read that Dr. Mambu's personal experience with transforming his practice into a patient-centered medical home validated points I made in the commentary. I also received positive comments from others who share similar perspectives.<sup>1,2</sup> I agree that the 6 points Dr. Mambu highlights are crucial considerations to guide refinement and implementation of the patient-centered medical home model of care and the recognition (accreditation if you will) and financing of practices. The emerging relationship among health care providers, insurance health plans, and health care purchasers is especially critical to the success of this innovation. I thank Dr. Mambu for his kind reply.

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## Re: Outcomes From Treatment of Infertility With Natural Procreative Technology in an Irish General Practice

*To the Editor:* We read with interest the paper by Stanford et al<sup>1</sup> describing results from infertility treatment

using a “systematic medical approach for optimizing physiologic conditions for conception.” Although the authors make some good basic observations and their minimalist approach will no doubt appeal to many patients, extolling “Natural Procreative Technology” (NPT) as a general treatment philosophy for infertility is worrisome at several levels.

Considerable experience in subspecialty infertility practice has confirmed the age of the female is the single most important factor influencing a couple's reproductive outcome.<sup>2</sup> Early diagnosis and treatment is therefore critical to optimize success. But NPT's investigation phase alone requires 4 months to complete, and total deployment of NPT consumes 2 years. With their “biological clocks” ticking, it is not surprising that >50% of NPT patients dropped out.

Sadly, many probably never go back to their primary care provider. Patient satisfaction with the referring doctor is often related to timely referral to the fertility specialist. Some patients who conceive after in vitro fertilization (IVF), particularly if their primary physician failed to facilitate a prompt subspecialty referral, express deep resentment due to the patient's perception that their referral was needlessly slow.<sup>3</sup> This patient frustration has even triggered formal legal action seeking damages against doctors thought responsible for delayed infertility treatment.<sup>4</sup>

Studies of effectiveness of NPT against IVF in couples with unexplained infertility are welcomed. But curiously, Stanford et al assessed efficacy by cohort rather than the standard “per-cycle” pregnancy rate methodology, as followed by recognized registries in Europe and the United States. These patient registries have been collecting data on per-cycle pregnancy rates for many years. One reason they do not use longitudinal cohort analysis is because the further in time from intervention that a pregnancy occurs, the less likely that it actually resulted from treatment.<sup>5</sup> Although a cohort approach can have merit, its use by Stanford et al puts their conclusions outside the mainstream of relevant datasets and greatly diminishes the impact of their work.

It would be unfair to discount the potential usefulness of diagnostic tests collected during NPT. Cervical mucous monitoring, urinary luteinizing hormone surge testing, and reviewing timed intercourse schedules are all important patient education interventions and probably do help some women conceive. Yet the net effect of NPT seems closely allied to expectant management, reminiscent of a distant era where pregnancy rates rarely drifted above 25% per cycle.

The application of a structured infertility treatment program for use in general practice settings to improve care is not entirely new.<sup>6</sup> However, we strongly disagree with diverting 2 years of an infertility patient's time into a scheme where per-cycle pregnancy rates are unknown and where most patients, even when ideally selected, will quit treatment.

Providing comprehensive information to patients about treatment options is a cornerstone of the patient-physician relationship. NPT may warrant consideration

for patients who find the advanced reproductive technologies too invasive, too expensive, or inconsistent with their personal beliefs. But given the known efficacy of treatment after proper application of the advanced reproductive technologies, we believe this passive approach is poorly suited for most cases where female age is  $\geq 35$  years old. In the report by Stanford et al, it seems that more than half of the study patients agree.

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The above letter was referred to the authors of the article in question, who offer the following reply.

## Response: Re: Outcomes From Treatment of Infertility With Natural Procreative Technology in an Irish General Practice

*To the Editor:* We welcome the opportunity to respond to the concerns raised by Dr. Sills and Drs. Walsh. Treatment with natural procreative technology (NPT) is hardly “minimalist” or “passive” and involves controlled ovulation induction and luteal-phase hormone correction for most patients, as discussed in our paper. We agree that “early diagnosis and treatment is therefore critical to optimize success.” In fact, the monitoring of fertility biomarkers done for NPT frequently accelerates this process. Abnormalities of the fertility cycle can be identified early, and couples can be identified as having difficulty conceiving before 1 year.<sup>1,2</sup> To facilitate comparisons we eliminated these couples from our study analysis, but this is an important advantage NPT can offer to women who otherwise would have to wait 6 to 12 months to discover a problem. Although treatment with NPT can take up to 24 months, the majority of couples

conceive well before this time (78% within the first 12 months in our study).

For women over age 35, live birth rates are lower for all infertility treatments including in vitro fertilization (IVF, except for donor eggs).<sup>3</sup> As we stated in our paper, the time frame of NPT treatment may be considered a disadvantage for some women who are approaching the end of their reproductive years. However, in our study, there were still substantial live birth rates with NPT at advanced ages (Table 4).

Dr. Sills et al express concern over the drop out rates in our study (Table 3) but do not mention that these are very similar to dropout rates in IVF studies, as we point out in our discussion and as pointed out in the paper they cited.<sup>4,5</sup> Studies of continuation are needed for all forms of fertility treatment.

We are surprised that Dr. Sills et al advocate for analyzing outcomes on a per cycle basis. We chose to follow the recommendations of the Cochrane Collaboration, that outcomes be reported as a pregnancy rates per woman or couple, because repeat cycle data are not statistically independent and are less relevant to the patient.<sup>6,7</sup> More accurate comparisons of outcomes could be made if IVF clinics followed these recommendations.

We must question Dr. Sills' claim that “some patients . . . expressed deep resentment due to the patient's perception that their referral was needlessly slow.” The reference cited was simply a chart review and was very limited in the conclusions that could be drawn.<sup>4</sup> We also feel it is necessary to clarify that the *London Daily Mail* case quoted in their letter actually involved possible legal action against the Primary Care Trust, due to the 4-year delay caused by the postcode lottery system. Ironically, the patient may well have benefited from NPT treatment had it been offered to her through a specially trained general practitioner.

We agree with Dr. Sills and colleagues that “providing comprehensive information to patients about treatment options is the cornerstone of the patient-physician relationship.” Patients suffering from infertility deserve to be made aware of the options available to them, including NPT. At any age, couples should be given the best possible data for outcomes to make their own choices about treatment.

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