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TRANSITIONS IN WOMEN'S HEALTHCARE: THE IMPACT OF THE NEW POPULATION PARADIGM

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The concept of the profession of medicine has undergone an unparalleled paradigm shift in recent decades, the result of the invasion of capitalistic market forces, the exponential expansion of information technology, and the encroachment of bureaucratic control. An additional seismic shift has more recently occurred as a revision in the approach to prevention combined with new administrative mandates have altered the horizon of healthcare, shifting the focus from the individual to the population, thereby further threatening to disrupt the physician-patient relationship, which has been foundational to care. These changes are particularly prominent in women's health where prevention and the physician-patient relationship have been key components of care.

The Way We Were . . .

Humans are holistic and relational beings; and medicine was a holistic and relational art. Nowhere is that seen more clearly than in the biopsychosocial model of holistic care that dominated medicine and women's health for the last three decades. The term, coined in 1977 by George Engel,[1] was a reaction against the materialistic and reductionist orientation of medical thinking, and an attempt to apply complex causality and the emergent properties of systems to healthcare.[2] It was conceptualized through the use of three overlapping circles of influence, acknowledging that biological, psychological, and socio-economic factors were all integrally important aspects of human health and well-being. Under the aegis of this model, healthcare was distinctly individualistic, yet maintained a corporate perspective, understanding that individual health was part of a greater systemic whole. The focus, however, remained on the individual.

Prevention and education were essential aspects of this holistic approach to women's health that centered on screening for cervical abnormalities and sexually transmitted diseases (STDs), and the counseling and provision of contraception. The Pap smear was the heart of gynecologic care. Beginning at age 16 or the onset of sexual activity, it was continued yearly for life, providing an opportunity to establish relationships and build rapport with adolescents in addition to addressing contraceptive needs, STD screening, and sexual health. Admittedly, the frequency of Pap smear screening at that time was founded on an erroneous understanding of the human papillomavirus (HPV), the organism responsible for most cervical abnormalities. Scientific knowledge had suggested that the viral infection was life-long and accounted for a cascading continuum of progressive disease from cervical intraepithelial neoplasia (CIN or dysplasia) to cancer, reinforcing the need for frequent screening visits.

Contraception, another preventive issue in women's health, was prudently coupled with Pap smear and STD screening. In the 1980's, the available contraceptive methods were primarily oral or barrier; other methods such as intrauterine devices were available but not widely utilized. Dispensing oral contraceptives on a yearly basis provided opportunities to reinforce compliance, to educate young women concerning sexual and life-style choices, and to perform STD screening.

As patients matured, so did their health concerns: breast care and mammograms entered the picture. At yearly clinical exams, patients were taught how to perform breast self-exams and encouraged to take an active role in their own breast health. By the 1970's, studies by Gershon-Cohen, Egan, and then a randomized-controlled trial by Shapiro revealed a benefit to routine mammographic screening for women,[3] but provided no guidelines for the frequency of such exams. Original recommendations included a baseline examination at 35-40 and after 50 yearly for life, but no consensus existed.

Surgical techniques and technology were also quite limited 30 years ago. Gynecologic procedures were limited to tubal ligations, hysterectomies (vaginal or abdominal) and vaginal repairs. Laparoscopy and lasers were just entering the scene. More invasive procedures were normative, requiring longer hospitalizations, extended recovery, and lengthier physician involvement.

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In all these aspects of women's health, the physician-patient relationship was a central and essential component of that care. The requirements of regular visits for preventive screening and education, as well as the prolonged post-operative recovery and care, established and supported the physician-patient relationship, so vital to ongoing healthcare for women. But women's healthcare is changing rapidly along with the rest of healthcare.

The Way We Are Today . . .

The focus of healthcare has changed, shifting from the idea of complex causality to structural causality. Distinct evidence-based algorithm boxes that provide no room for context and leave no room for contingencies have replaced the biopsychosocial model of healthcare that acknowledged the complexity of human health. The educational aspects of healthcare have likewise taken on new forms as education has been reduced from a relational enterprise of sharing knowledge to a technological transfer of information. Technology (apps) and social media are replacing relationally-based educational methods, greatly improving access to information and availability of healthcare resources, but forfeiting the care and accountability associated with relational teaching and learning. While these new approaches have been considered "personal," they are not relational: the ideas have been conflated and confused.

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The concept of prevention has shifted subtly, yet dramatically, in recent years as well. No longer is prevention about preventing an early abnormality from becoming a serious problem, but about preventing the abnormality in the first place. While this approach is highly advantageous, it has had significant consequences for women's healthcare. In screening for cervical abnormalities, no longer is the focus on preventing the progression of cervical abnormalities, but on preventing the cause of the abnormality by means of HPV vaccinations. Yet, with administration from ages 9-11, HPV vaccination falls outside the scope of the obstetrician-gynecologist as we have now defined it, diminishing the opportunity for contact with adolescent women. Additionally, as our knowledge of HPV has grown, the

onset of Pap screening has been delayed from 16 to age 21, and the frequency of screening has decreased from yearly to every 3-5 years. While this cost-effective change in Pap smear frequency has eliminated unnecessary procedures it has also reduced opportunities for physician-patient contact. Moreover, there is now no effective mechanism for STD screening, a vital concern for sexually active young women.

But another change is on the horizon. In 2014, the FDA approved Cobas® for primary cervical cancer screening.[4] Cobas® is a new qualitative assay of a sample of cervical cells, providing specific genotype information for HPV types 16 and 18 with pooled screening for 12 other high-risk HPV types.[5] It has been recommended that screening now be delayed to age 25 with Cobas® alone. If the screen is negative for HPV 16 and 18, screening is to be repeated every 5-6 years. If the screen is positive for HPV 16 or 18, colposcopy is advised. If the screen is positive for another high-risk viral type, cytology and colposcopy are indicated.[6] And again, opportunities for contact are diminished.

Contraception has undergone two major changes in the past few years that have likewise impacted care: the expansion of long-acting reversible contraceptives (LARCs) and promotion of over-the counter post-coital contraception. The shift to LARCs has contributed to the diminished rate of unplanned pregnancy by providing 3-5 years of coverage and eliminating compliance issues. But it has also jettisoned another compelling reason for a healthcare visit. Likewise, the availability of post-coital contraceptives without age limits or discretionary control has further diminished physician contact and eliminated another means of STD screening.

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The approach to breast health has also seen significant alterations. Teaching of the breast self-exam was eliminated in 2009 by the United States Preventive Services Task Force (USPSTF)[7] and is no longer recommended by any organization, removing another opportunity for education and relationship building from the armamentarium of physicians. Even the annual clinical breast exam has been eliminated by many organizations except for the American College of Obstetricians and Gynecologists (ACOG) where it is considered a discretionary aspect of the well-woman care.[8] Mammographic screening has also come under scrutiny as studies have repeatedly questioned its value. Based on SEER data from the National Cancer Institute, the USPSTF in 2009 recommended screening only every 2 years from 50-69.[9] A recent Canadian National Breast Screening Study with 25 years of data also found significant over-diagnosis and no decrease in mortality for screened women.[10] For

screening to be effective it "must meaningfully change mortality," but this raises the question, "meaningful for whom?" Evidently, the answer is population-based. There currently exist three different sets of recommendations for screening frequency from various medical organizations, all of which claim to be "evidence-based."

In light of this compendium of changes, several entities have called for elimination of the yearly examination, citing its lack of cost-effectiveness.[11] While the American College of Obstetricians and Gynecologists has understandably not concurred with those recommendations, the 2012 Committee Opinion description of what is to be included in the "Well-Woman Visit" (vital signs, BMI, palpation of the abdomen and inguinal lymph nodes, and assessment of overall health) is so meager and meaningless as to constitute tacit agreement.[12] Even breast and pelvic exams are deemed discretionary. Moreover, in a May 2014 publication entitled, "The Initial Reproductive Health Visit,"[13] ACOG elaborated new recommendations for an adolescent visit. This exam, offered at ages 13-15, entails a general exam and visual genital exam only, the purpose of which is to "start a physician-patient relationship and counsel regarding healthy behaviors." However, to expect a parent to take a healthy adolescent out of school, to pay a premium co-pay to see a "specialist" for something that can be done by family physicians, and that offers no immediate benefit is unrealistic. And with no additional visits until age 25, one visit is unlikely to constitute a relationship.

Surgical care has transitioned from primarily invasive to predominantly minimally invasive techniques. Almost all major procedures are now considered "outpatient" regardless of physician judgment, further diminishing relational contact with patients. Robotic surgery entered the gynecologic operative suite but has increasingly been found to be less than ideal. Furthermore, due to the time consuming nature of robotic-training, instruction in traditional surgical techniques has been greatly reduced thereby diminishing the armamentarium of gynecologic surgeons.

The Way We Will Be . . .

There have been tremendous changes in the area of women's health that fall under the rubric of progress and are no doubt advantageous from the perspective of efficiency and effectiveness. But to paraphrase the First Law of Thermodynamics, all gains within systems entail losses, and this is no less true in medicine. What we are gaining in efficiency and effectiveness, we are rapidly losing in the relational aspects of healthcare. Persons have been replaced with data, and relationships with technique, as that enigmatic concept of "health" is now being defined not by individual characteristics but by population statistics. Technology, information, and concerns about population health have replaced the personal interactions of touching and talking. Furthermore, changes that have sought to diminish healthcare costs have provided more fuel to the fire of depersonalization by shifting the focus of prevention from the individual to the population and diminishing the opportunity for relational contact. In the pursuit of *population* health, we have relinquished *individual* care. But how important are the relational aspects of healthcare to health? Will the pursuit of technological mastery of population health and the ensuing loss of relationship ultimately be beneficial or detrimental? Only time will tell whether health is fundamentally about quality or a quantifiable reality, and whether improved population health is possible apart from relational care.

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