

Disparate British Breast Reconstruction Utilization: Is Universal Coverage Sufficient to Ensure Expanded Care?

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Summary: Our intent is to improve the understanding of the ability of healthcare providers to deliver high-quality care as we approach an era of universal coverage. We adopted 2 unique vantage points in this article: (1) the mandated coverage for immediate breast reconstruction (IBR) surgery as a microcosmic surrogate for universal coverage overall and (2) we then scrutinized the respective IBR utilization rates in a contemporaneous system of 2 healthcare delivery models in the United Kingdom, that is, the public National Health Service trust versus private-sector hospitals. A literature review was performed for IBR rates across public trust and private-sector hospitals in the United Kingdom. The IBR rate among public trust hospitals was 17% compared with 43% in the private sector. In the trust hospital setting, the enactment of 2 government mandates, intended to increase the access to cancer care, seemed to fall short in maximizing the ability of surgical practitioners to deliver quality care to patients. Among women who did not receive IBR, 65% felt that they had received the sufficient amount of information to appropriately inform their decision. In addition, only 46% of this same cohort reported a consultation with a reconstructive surgeon preoperatively. Private-sector hospitals delivered better IBR care because of the likely presence of infrastructure and financial incentives for physicians. These results serve as a call for a better alignment between policy initiatives designed to expand care access and the prerogatives of physicians to ensure an optimized delivery of the expanded care such policy mandates. (*Plast Reconstr Surg Glob Open* 2016;4:e738; doi: 10.1097/GOX.0000000000000762; Published online 13 June 2016.)

The recent 6-3 US Supreme Court ruling to uphold, for the second time, a key provision in the Affordable Care Act (ACA)^{1,2} solidifies the coronation of universal coverage in this coun-

try. In a lot of ways, it highlights the culmination of several attempts to expand healthcare delivery in the United States and improve equitability in access to care. Antecedent efforts have included the 2006 institution of Commonwealth Care in the state of Massachusetts,³ the rapid Medicaid expansion in the 2000s,⁴ and even earlier but more narrowly, the 1998 enactment of the Women's Health and Cancer Rights Act (WHCRA)⁵ that mandated insurance coverage for breast reconstructive surgery after breast cancer treatments.⁵

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Although these strategies have largely been met, reassuringly, with sustained improvements in care access, they do raise unanticipated questions about *if* and *how* an ever adapting but already-burdened physician workforce is poised to cope. In other words, does expansion of coverage equate to expansion of access to high-quality patient care? This issue is especially poignant given the current national discourse surrounding physician payment reform, ballooning healthcare spending, and shift toward more of a value-based healthcare delivery model.^{6,7} At the same time, there exists evidence of increasing physician burnout⁸⁻¹¹—estimated at an astonishing rate of 30%¹²—related, in part, to reduction in reimbursements,¹³ poor debt relief,¹⁴ and expanding administrative/regulatory demands.¹³⁻¹⁷ A recent 2014 cross-sectional study of over 20,000 physicians revealed that 81% of respondents described themselves as overextended and 44% planned to take steps in the near future to actively reduce patient access to their services. These could take forms of early retirement, pursuing nonclinical opportunities, or decreasing the number of patients seen.¹⁸ In addition, among survey respondents who consider themselves to be specialists, 52% maintain a negative view about the future of the profession and 49% give the ACA a poor overall grade as a vehicle for healthcare reform.¹⁸ These survey results underscore the fact that many physicians, not just surgeons, are dissatisfied with the current healthcare system, in particular, the existing payment models, (lack of) physician autonomy, and administrative overhead. If this undercurrent of disaffection is allowed to persist, it could weaken the recent successes in healthcare reform and greatly diminish our ability not only to expand quality care to the roughly 30 million Americans expected to gain increased coverage under the ACA but also to even maintain such level of care for everyone else. This is because burnout has been shown to be significantly associated with medical errors, poor job satisfaction, and low levels of professional engagement among physicians.^{11,19-21} It is, therefore, pivotal to the success of any effort to improve the performance of the US health system for us to critically evaluate the alignment between such efforts and the prerogatives of the physician workforce, that is, financial remuneration and/or administrative incentives. Such a synergistic approach to physician incentives would also significantly diminish the prevalence of burnout.

Perhaps there is no better microcosmic display, through which to understand the dynamics between healthcare delivery and healthcare providers, than that afforded by the changing accessibility of immediate breast reconstruction (IBR) in the post-WHCRA

era. Multiple studies have established the psychosocial and cosmetic importance¹⁹⁻²¹ of IBR after mastectomy. Namely, recipients of IBR have been shown to have higher postoperative quality of life, physical self-esteem, and psychosocial functioning.²²⁻²⁴ Although the post-WHCRA era has seen an increase in the rates of IBR to approximately 38%,^{25,26} there are lingering concerns as to whether utilization rates have been maximized.²⁵

To improve our understanding of whether universal coverage leads to improved access to care, we decided to adopt the unique perspective, via a contemporaneous system of 2 healthcare delivery models in the United Kingdom, of examining the striking disparities in the IBR delivery across the public trust and private hospitals. Our approach was incited by the mounting interest in recent years to place the performance of various US healthcare domains (cost, safety, accessibility, and equitability) in an international context. This enables the identification of areas where we can improve our healthcare delivery²⁷ and allows us to measure our efforts for universal care delivery against other industrialized nations.

In the United Kingdom, through the auspices of the National Health Service (NHS), all residents regardless of age, income, or ethnicity are guaranteed free and equal healthcare at point of use.²⁸ The delivery of acute surgical services in the United Kingdom is facilitated mainly through (1) NHS trust hospitals accountable to the Department of Health and (2) a for-profit private practice sector. A third entity known as Independent Sector Treatment Center, which are privately owned entities contracted by the NHS, currently accounts for only 2% of the annual elective NHS surgical volume.²⁹ According to a recently released NHS-sanctioned report, there is significant divergence in the rates of IBR performed at NHS trust hospitals and the for-profit private sector, 2 otherwise parallel healthcare delivery systems.^{30,31} Of note, Independent Sector Treatment Center was not included in these reports. The IBR rate among NHS trust hospitals was 17% compared with 43% in the private sector. Further inquiry yielded granular data on the provision of IBR services in NHS trust hospitals. Among women who did not receive IBR, only 65% felt that they had received the sufficient amount of information to appropriately inform their decision. Furthermore, merely 46% and 25.1% of this patient cohort reported a consultation with a reconstructive surgeon and viewing pictures of expected reconstructive results, respectively.³² In addition, 52.2% of mastectomy-only patients responded in questionnaire that not having been offered IBR was a key factor in their not pursuing IBR.³²

Although there is bound to be multiple factors contributing to this seemingly puzzling disparity across the 2 parallel healthcare tracks in the United Kingdom, we can reliably conjecture from the above findings that the private sector provides a clinical practice environment that incentivizes the delivery and receipt of IBR. Protracted wait times for elective surgical procedures in the United Kingdom have been well documented.^{33,34} In an attempt to curb this as it is related to patients with cancer, national guidelines were created in 2000 as part of an “NHS Cancer Plan” to include a mandate for the definitive treatment of all newly diagnosed cancer patients within a set waiting time period, 31 days in the case of breast cancer.³⁵ This time period begins when the patient is educated on her breast cancer diagnosis and the multidisciplinary team puts forward a management plan. There was also a preexisting government-sanctioned recommendation in 2002³⁶ that IBR should be made available to all women at the time of mastectomy barring prohibitive surgical fitness. These 2 UK government mandates, originally intended to increase IBR accessibility and analogous to the spirit of the WHCRA in the United States, caused unforeseen negative effects on the ability of surgical practitioners to deliver quality care to patients in the NHS environment.³¹ In other words, because of capacity constraints, a shrinking funding climate, and the multidisciplinary nature of breast cancer treatment, NHS surgical practitioners were placed under considerable pressure to meet the “31-day” targets. Moreover, because the performance of IBR is not explicitly covered by the 31-day national target, there is a perception that some NHS surgeons deliberately discourage patients from pursuing IBR based on extraneous considerations.³⁷ These efforts to delay or defer IBR may take the forms of requesting a psychological evaluation before IBR or presenting the IBR option in an equivocal way.³⁷ In addition, these NHS surgical practitioners reported that “not enough money” and “resources” were made available for IBR.³⁷ Facing the same medical and societal demands for IBR, despite the lack of direct government mandates, the private sector, however, delivers IBR at a significantly higher rate of 43% than the 17% at NHS hospitals. High-quality care as defined by the Institute of Medicine is “doing the right thing for the right patient, at the right time, in the right way to achieve the best possible results.”³⁸ In that regard, one could argue that the UK private sector is delivering more timely and perhaps better post-mastectomy reconstructive care than NHS hospitals. It is, therefore, plausible that something else, other than government mandates, may have drawn out additional productivity from motivated practitioners

to ensure the actual delivery of the intended quality care. At a minimum, it is conceivable that the necessary infrastructure, management support, and financial incentive for physicians need to be in place, so that well-intentioned policy initiatives are primed to succeed.

In the United Kingdom, the funding structure for care in the voluntary, for-profit, private sector is dictated for the most part by contributions from private medical insurance in addition to direct payments from patients.³⁹ Practice fees are largely at the discretion of the individual surgical specialists (“consultants”),⁴⁰ which are set to his/her level of expertise and the local market. Surgical consultants contracted to work for the NHS, on the other hand, are paid a fixed salary, in accordance to specialty, and for a set period of 40 hours per week.³⁹ Above their contractual obligation, consultants are free to undertake work in the private sector. The vast majority of private-sector consultants also have parallel NHS appointments. In addition, as stipulated in the NHS consultant contract,⁴¹ there is no cap on the amount of supplemental income to be gained from private non-NHS work. This seems to suggest that physicians are primed to be more financially motivated to deliver complementary elective care in private hospital settings compared with NHS hospitals. Further supporting this suggestion is the general consensus—although never publicized for obvious reasons—that wait times for patients who receive care at private hospitals are significantly shorter than those at NHS hospitals.

The belief that incentives are a key driver of human behavior underpins much of behavioral economics.⁴² This field of study may allow us to comprehend how “the timing, frequency, and amount of payment influence behavior and how to address unintended consequences of incentives.”^{42(p2281)} The current transition toward a healthcare delivery model in the United States, centered on increased coverage, the underlying premise of the ACA, has yet to pay comparable attention to the environment within which healthcare providers are expected to deliver such care. Given the highlighted disparity evident across the parallel care delivery systems in the United Kingdom, healthcare policy setup to emphasize only improving access will unlikely fully achieve the intended goal of actualizing this care. It is only when the other half of the care delivery equation, ie, the healthcare providers, is taken into consideration with better individual interest alignment, would such expanded care be effectively delivered.

There is already compelling evidence that in the United States, among individuals with insurance coverage, there exists unequal access to elective surgical

care. In examining access to total hip arthroplasty in S.C., Schwarzkopf et al⁴³ discovered that individuals with income-based insurances, which generally reimburse less well than other insurances,⁴⁴ were less likely to have access to an orthopedic surgeon and were more likely to experience longer wait times. Those authors concluded that even though the ACA “will increase the number of insured patients, it may not similarly increase access to providers.”^{43(p1083)} A 2015 brief report by the National Center for Health Statistics revealed that the percentage of office-based physicians accepting Medicaid patients (68.9%) was less than Medicare (83.7%) or private insurance (84.7%).⁴⁵ Additional evidence suggests that physicians’ acceptance of income-based insurance patients, such as Medicaid, will increase only in the context of increased reimbursement.^{43,44,46,47} These all underscore the impact of reimbursement rates on the ability of policy initiatives (eg, Medicaid expansion) to successfully facilitate the actual delivery of high-quality care.

Present-day efforts to restructure healthcare delivery in the United States bring an air of inevitability to physician payment reform. Correspondingly, in recent years, we have witnessed a shift away from traditional fee-for-service reimbursement schemes, which rewarded volume, to more value-based payment models. However, for these programs to succeed, physician behavior needs to be better aligned with program goals. This likely means a “combination of infrastructure changes, nonfinancial incentives, and financial physician incentives across different settings”.^{48(p115)} The Hippocratic Oath and social contract to care for the indisposed are not mutually exclusive from the physicians’ need to be appropriately motivated emotionally and financially. The same review article, published recently in *Annals of Internal Medicine*,⁴⁸ espoused the utility of certain principles of behavioral economics in helping design methods to appropriately incentivize physicians. The authors suggested that it is critical to “make financial rewards more salient through timing or linking it to performance....” and to enact “infrastructural and care process changes that make high-value care the default”.^{48(p117)} We believe that only by aligning the interests of all parties, we can achieve profound and sustainable transformation in US healthcare delivery. Policy makers, payer groups, healthcare organizations, and professional societies must begin to work in concert to scrutinize and avert the unforeseen negative impact of new healthcare reform on physician satisfaction and well being.¹⁷ Not surprisingly, a 2005 *Lancet* study noted an increase in burnout among UK physicians in the periods after the implementation of new health policy.^{17,49,50} The

present dispute stems from a proposed reduction in the amount of hours for which junior physicians will be able to receive additional compensation for work procured in the private sector.⁵⁰

In conclusion, as the landscape of healthcare in the United States marches toward a future that is sure to include broader health coverage under the ACA, an increasingly ageing population, and a more cost-conscious spending climate, reimbursements for physicians must be concomitantly focused on to ensure an environment that is conducive to the effective delivery of the expanded care. Given physicians’ role in practice decision making, we assert that policy consideration should now be given to payment models that provide “infrastructure (eg, replacement of the fundamentally flawed sustainable growth rate formula by a predictable, stable, and fair reimbursement schema) and incentives rather than payment reductions and penalties (eg, for failure to report quality measures or use electronic prescribing).”^{17(p2010)} Although insights from behavioral economics cannot underpin all clinical decision making,⁴² the needs of healthcare providers, the driving engine of healthcare delivery, must not be ignored by system inefficiencies or federal policy. Engagement with and buy-in among physicians are critical to the translation of sound government policy into actual quality care. Increased care access is only half of the equation and those who stand ready to deliver the care should begin to warrant our attention as the disparity in IBR delivery across the parallel UK systems seems to have taught us.

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REFERENCES

1. The Patient Protection and Affordable Care Act, Public Law 111–148. March 23, 2010.
2. Chen JT, Israel JS, Poore SO, et al. The Affordable Care Act: a primer for plastic surgeons. *Plast Reconstr Surg*. 2014;134:830e–837e.
3. Zhu J, Brawarsky P, Lipsitz S, et al. Massachusetts health reform and disparities in coverage, access and health status. *J Gen Intern Med*. 2010;25:1356–1362.
4. Iglehart JK, Sommers BD. Medicaid at 50—from welfare program to nation’s largest health insurer. *N Engl J Med*. 2015;372:2152–2159.
5. Xie Y, Tang Y, Wehby GL. Federal health coverage mandates and health care utilization: the case of the women’s health and cancer rights act and use of breast reconstruction surgery. *J Womens Health (Larchmt)*. 2015;24:655–662.
6. Song Z. Becoming a physician in the age of payment reform. *Healthc (Amst)* 2014;2:168–169.

7. Burwell SM. Setting value-based payment goals—HHS efforts to improve U.S. health care. *N Engl J Med*. 2015;372:897–899.
8. Gabbe SG, Melville J, Mandel L, et al. Burnout in chairs of obstetrics and gynecology: diagnosis, treatment, and prevention. *Am J Obstet Gynecol*. 2002;186:601–612.
9. Fields AI, Cuerdoon TT, Brasseur CO, et al. Physician burnout in pediatric critical care medicine. *Crit Care Med*. 1995;23:1425–1429.
10. Campbell DA, Jr, Sonnad SS, Eckhauser FE, et al. Burnout among American surgeons. *Surgery* 2001;130:696–702.
11. Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med*. 2012;172:1377–1385.
12. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. *Lancet* 2009;374:1714–1721.
13. Allegra CJ, Hall R, Yothers G. Prevalence of burnout in the U.S. oncology community: results of a 2003 survey. *J Oncol Pract*. 2005;1:140–147.
14. Dyrbye LN, Thomas MR, Shanafelt TD. Medical student distress: causes, consequences, and proposed solutions. *Mayo Clin Proc*. 2005;80:1613–1622.
15. Shanafelt TD, Sloan JA, Habermann TM. The well-being of physicians. *Am J Med*. 2003;114:513–519.
16. Shanafelt T, Dyrbye L. Oncologist burnout: causes, consequences, and responses. *J Clin Oncol*. 2012;30:1235–1241.
17. Dyrbye LN, Shanafelt TD. Physician burnout: a potential threat to successful health care reform. *JAMA* 2011;305:2009–2010.
18. The Physicians Foundation. *2014 Survey of America's Physicians*. 2014. Available at: http://www.physicians-foundation.org/uploads/default/2014_Physicians_Foundation_Biennial_Physician_Survey_Report.pdf. Accessed August 7, 2015.
19. Stark R. Increasing physician engagement: start with what's important to physicians. *J Med Pract Manage*. 2014;30:171–175.
20. Janus K, Amelung VE, Baker LC, et al. Job satisfaction and motivation among physicians in academic medical centers: insights from a cross-national study. *J Health Polit Policy Law* 2008;33:1133–1167.
21. Wilters JH. Stress, burnout and physician productivity. *Med Group Manage J*. 1998;45:32–4, 36–7.
22. Dean C, Chetty U, Forrest AP. Effects of immediate breast reconstruction on psychosocial morbidity after mastectomy. *Lancet* 1983;1:459–462.
23. Noone RB, Frazier TG, Hayward CZ, et al. Patient acceptance of immediate reconstruction following mastectomy. *Plast Reconstr Surg*. 1982;69:632–640.
24. Stevens LA, McGrath MH, Druss RG, et al. The psychological impact of immediate breast reconstruction for women with early breast cancer. *Plast Reconstr Surg*. 1984;73:619–628.
25. Offodile AC 2nd, Tsai TC, Wenger JB, et al. Racial disparities in the type of postmastectomy reconstruction chosen. *J Surg Res*. 2015;195:368–376.
26. Albornoz CR, Bach PB, Mehrara BJ, et al. A paradigm shift in U.S. breast reconstruction: increasing implant rates. *Plast Reconstr Surg*. 2013;131:15–23.
27. Squires DA. The U.S. health system in perspective: a comparison of twelve industrialized nations. *Issue Brief (Commonw Fund)* 2011;16:1–14.
28. The Change Foundation. *Integrated Healthcare in England: Lessons for Ontario [Case Study]*. Toronto: The Change Foundation; 2009.
29. Audit Commission. *Is the Treatment Working? Progress with the NHS System Reform Programme*. London: Audit Commission; 2008.
30. Jeevan R, Cromwell DA, Browne JP, et al. Findings of a national comparative audit of mastectomy and breast reconstruction surgery in England. *J Plast Reconstr Aesthet Surg*. 2014;67:1333–1344.
31. The NHS Information Centre. *National Mastectomy and Breast Reconstruction Audit, Second Report*. Leeds: The NHS Information Centre; 2010. Available at: <http://www.hscic.gov.uk/catalogue/PUB02722/clin-audi-supp-prog-mast-brea-reco-2009-rep1.pdf>. Accessed August 5, 2015.
32. Jeevan R, Cromwell D, Browne J, et al. *Third Annual Report of the National Mastectomy and Breast Reconstruction Audit*. Leeds: The NHS Information Centre; 2010. Available at: <http://www.rcseng.ac.uk/surgeons/research/surgical-research/docs/national-mastectomy-and-breast-reconstruction-audit-third-report-2010>. Accessed August 5, 2015.
33. Dimakou S, Parkin D, Devlin N, et al. Identifying the impact of government targets on waiting times in the NHS. *Health Care Manag Sci*. 2009;12:1–10.
34. Cooper ZN, McGuire A, Jones S, et al. Equity, waiting times, and NHS reforms: retrospective study. *BMJ* 2009;339:b3264.
35. Department of Health. *The NHS Cancer Plan*. London: Department of Health; 2000.
36. National Institute for Clinical Excellence. *Guidance on Cancer Services. Improving Outcomes in Breast Cancer – Manual Update*. London: NICE; 2002. Available at: http://www.nice.org.uk/nicemedia/pdf/Improving_outcomes_breastcancer_manual.pdf. Accessed August 6, 2015.
37. Jeevan R, Browne J, van der Meulen J, et al. *First Annual Report of the National Mastectomy and Breast Reconstruction Audit*. Leeds: The NHS Information Centre; 2008. Available at: <http://www.rcseng.ac.uk/surgeons/research/surgical-research/docs/national-mastectomy-and-breast-reconstruction-audit-first-report>. Accessed August 5, 2015.
38. Agency for Healthcare Research and Quality (AHRQ). *Understanding Health Care Quality*. 2006. Available at: <http://www.ahrq.gov/consumer/guidetoq/guidetoq4.htm>. Accessed August 5, 2015.
39. Stubbs D, Ward ME, Pandit JJ. Estimating hourly anaesthetic and surgical reimbursement from private medical insurers' benefit maxima: implications for pricing services and for incentives. *Anaesthesia* 2010;65:396–408.
40. British Medical Association. *Setting Up in Private Practice - A Guide for Doctors Setting Up in Private Practice*. London: BMA; 2014. Available at: <http://bma.org.uk/-/media/files/pdf/practical%20advice%20at%20work/private%20practice/setting%20up.pdf>. Accessed August 5, 2015.
41. British Medical Association. *The New NHS Consultant Contract (England)*. London: British Medical Association; 2003.
42. Khullar D, Chokshi DA, Kocher R, et al. Behavioral economics and physician compensation—promise and challenges. *N Engl J Med*. 2015;372:2281–2283.
43. Schwarzkopf R, Phan DL, Hoang M, et al. Do patients with income-based insurance have access to total joint arthroplasty? *J Arthroplasty* 2014;29:1083–1086.e1.
44. Altman D, Frist WH. Medicare and Medicaid at 50 years: perspectives of beneficiaries, health care professionals and institutions, and policy makers. *JAMA* 2015;314:384–395.
45. Hing E, Decker S, Jamoom E. Acceptance of new patients with public and private by office-based physicians: United States, 2013. *NCHS Data Brief* 2015;195: 1–8.

46. Decker SL. In 2011 nearly one-third of physicians said they would not accept new Medicaid patients, but rising fees may help. *Health Aff (Millwood)* 2012;31:1673–1679.
47. Decker SL. The effect of physician reimbursement levels on the primary care of Medicaid patients. *Rev Econ Househ.* 2011;5: 95–112.
48. Emanuel EJ, Ubel PA, Kessler JB, et al. Using behavioral economics to design physician incentives that deliver high-value care. *Ann Intern Med.* 2016;164:114–119.
49. Taylor C, Graham J, Potts HW, et al. Changes in mental health of UK hospital consultants since the mid-1990's. *Lancet* 2005;366:742–744.
50. Castle S. *Junior Doctors' Strike in England Disrupts Care for Thousands.* New York Times; 2016. Available at: <http://www.nytimes.com/2016/01/13/world/europe/doctors-strike-national-health-service.html> Accessed. Accessed January 25, 2016.
51. Gravelle H, Smith P, Xavier A. Performance signals in the public sector: the case of health care. *Oxf Econ Pap.* 2003;55:81–103.