Chronic Care In The English National Health Service: Progress And Challenges

Implementing chronic care policies requires nuanced approaches that recognize the role of competition in some areas of care and collaboration in others.

by Chris Ham

ABSTRACT: One of the aims of the English National Health Service (NHS) reform program has been to give higher priority to chronic care. Chronic care policy has focused on self-management, disease management, and case management, alongside a number of related initiatives. A start has been made in implementing these initiatives, and some are beginning to demonstrate benefits, like the new pay-for-performance contract for family physicians. However, investment in the chronic care policy has been modest, and the emphasis on case management appears to have been misplaced, when it is the cumulative effect of different interventions that is likely to have the greatest impact. [*Health Affairs* 28, no. 1 (2009): 190–201; 10.1377/hlthaff.28.1.190]

ENGLAND'S NATIONAL HEALTH SERVICE (NHS) is a universal, comprehensive, single-payer health system that is largely free at the point of use. Established in 1948, the NHS has been reformed at various points as successive governments have sought to improve its performance.[1] The most recent reforms encompassed a wide range of objectives, of which reducing waiting times for hospital treatment and raising standards in areas of clinical priority such as cancer services and the management of cardiovascular diseases were the most prominent.

Various policies have been developed since the 1990s to address the needs of people with chronic diseases. These policies include a stronger focus on the prevention of illness, measures to strengthen primary care, and initiatives designed to support people with chronic diseases in managing their own conditions. The NHS Improvement Plan, published in 2004, was important in bringing together these and other initiatives and in signaling the government's commitment to giving explicit priority to chronic care as a policy in its own right.[2]

In identifying chronic care as a priority, the government was reflecting interna-

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tional recognition of the need to reorient health systems in response to the changing burden of disease, as well as specific weaknesses in the performance of the NHS in this area. These weaknesses included the low priority attached to the prevention of illness compared with the treatment of sickness, variations in the performance of primary care, and lack of integration between primary and secondary care. Policymakers were also influenced by evidence that in some areas of care the performance of the NHS had fallen behind that of other countries.[3]

This paper aims to describe the chronic care policy developed in the English NHS, assess what has been achieved so far, and distill the lessons from this experience. The paper concentrates on England because in the wake of political devolution in 1999 to Northern Ireland, Scotland, and Wales, there has been increasing divergence on the direction and detail of health policy.[4] With a population of 50.8 million of the total U.K. population of 60.6 million, England is the largest of the four countries, and its experience therefore is the focus of this paper.

Origins And Overview Of The Chronic Care Policy

■ **Identification of chronic care as a priority.** Three main factors explain the identification of chronic care as an explicit priority for the English NHS. The first was recognition of the changing burden of disease in the population. Data from the General Household Survey indicate that more than 30 percent of people report that they have a chronic condition. This group accounts for 52 percent of all appointments with family physicians, 65 percent of all hospital outpatient appointments, and 72 percent of hospital bed days. The Department of Health's best estimate is that the treatment and care of people with chronic diseases account for 69 percent of total health and social care spending in England.[5]

The second factor was a perception among policymakers that there was room for improving chronic care in the NHS. The importance of this perception was confirmed by later survey evidence showing that English physicians were particularly concerned about the coordination of care for people with chronic diseases across time and settings. This finding reflects the historical division in British medicine between family physicians working in the community and hospital-based specialists. It illustrates that even in single-payer, universal health systems there are challenges in achieving integration of care.[6]

The third factor was the progress made in implementing earlier priorities and the opportunity this created to refresh the government's objectives. Implementation of the priorities set out in *The NHS Plan*, published in 2000 (specifically, major reductions in waiting times for hospital treatment for procedures such as total hip replacements and cataract surgery), enabled the government to set even more challenging objectives in this area, while also permitting new objectives to be set in other areas, including chronic care.[7]

■ **Chronic care model.** The chronic care policy promulgated in 2004 identified the need for action at three levels: self-management interventions for people able to

manage their own conditions; disease management by primary care teams for people with conditions that could be controlled through regular contact with a family physician, nurse, or other team member; and case management for patients whose complex needs meant that they needed more intensive support than that available through self-management and disease management. The NHS and Social Care Long Term Conditions Model was developed (Exhibit 1) to describe the various elements in government policy. The model drew explicitly on the Chronic Care Model developed by Ed Wagner and colleagues.[8] The inclusion of social care in the model was intended to signify that people with chronic conditions required a range of support services that extended beyond the limits of the NHS.

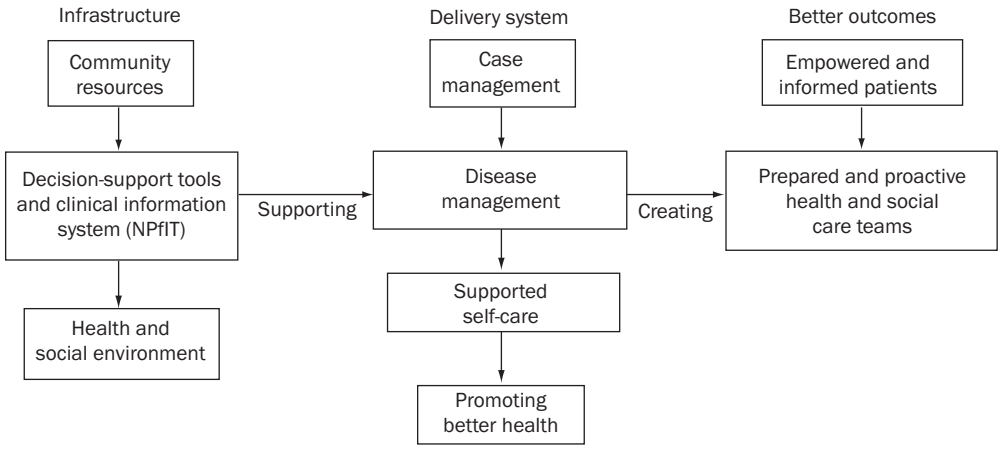
Achievements And Challenges

What has been achieved in the four years that have elapsed since publication of the NHS Improvement Plan?

■ **Self-management through the Expert Patient Programme.** The emphasis placed on self-management support was taken forward through the Expert Patient Programme initially. This flagship program draws on the chronic disease self-management program developed by Kate Lorig and colleagues.[9] It focuses on the provision of generic, as opposed to disease-specific, skills and is delivered by trained lay people with experience in chronic care. The program's generic focus reflected the government's concern in the early stages of policy development with offering support to people with a range of conditions, rather than favoring particular diseases.

An evaluation found that patients in the Expert Patient Programme intervention group reported considerably greater self-efficacy and energy after six months compared with a waiting-list control group. However, there were no statistically

EXHIBIT 1
The English National Health Service And Social Care Long Term Conditions Model



SOURCE: Department of Health, *Supporting People with Long Term Conditions—An NHS and Social Care Model to Support Local Innovation and Integration* (Leeds, England: DH, 2005). Reprinted with permission.

significant reductions in use of health services, measured by visits to family physicians and use of hospitals. Despite this, analysis showed that the program was cost-effective because it delivered tangible benefits for participants at low cost.[10]

Notwithstanding these positive results, the program's systemwide impact has been limited, largely because of the level of resources made available to support its implementation. Even with the commitment made in the 2006 white paper, *Our Health, Our Care, Our Say,* to increase enrollment from 30,000 participants in 2008 to 100,000 by 2010, most people with the potential to benefit will not have the opportunity to do so.[11] Disease-specific self-management programs supported by the NHS, such as those for people with diabetes, offer an alternative option for some people, and pilot programs such as Co-Creating Health, undertaken by independent agencies like the Health Foundation, are also contributing. Again, however, the coverage of these programs is constrained by limited funding. There is therefore a long way to go before self-management support reaches a sizable proportion of the estimated fifteen million people in England living with a chronic disease.

■ **Disease management through the primary care team.** Barbara Starfield's research suggests that the English health care system has a stronger primary care orientation than is the case in most other countries, notwithstanding variations in the standards of care in different areas.[12] The strength of primary care in the United Kingdom derives from the registration of almost all patients with a family practice, the expectation that the practice will be the first point of contact for patients, the continuity of care and relationships that are associated with this system, and the ability of most practices to provide comprehensive care to the registered population.

The development of group practice and teamwork during the lifetime of the NHS has enabled primary care to deal with a wide range of problems, as has the development of the electronic patient record. The latter allows practices to make use of disease registers to manage patients with chronic diseases and to audit their performance in relation to best-practice guidelines. Patients' access is facilitated by the absence of copayments and by targets that enable most patients to see a primary care professional within twenty-four hours and a family physician within forty-eight hours.

New pay-for-performance contract. Building on these strong foundations, the new pay-for-performance (P4P) contract for family physicians provides financial incentives to improve the quality of chronic care. Focused initially on ten chronic conditions and including 146 performance indicators covering clinical care, the organization of the practice, and patients' experiences, the contract awards physician practices points based on their level of achievement. It was introduced across the NHS in 2004 and was not piloted before implementation.

The quality indicators cover conditions such as coronary heart disease, hypertension, diabetes, and asthma. Examples of indicators include the existence of registries of patients with the designated conditions, evidence that practices have undertaken patient reviews, and evidence that practices have achieved specified

outcomes—for example, control of blood pressure and cholesterol levels. Nurses do much of the work needed to implement the indicators, and practices report their performance in a common format. Approximately 5 percent of practices are audited annually to check for accuracy.

An evaluation of the impact of the contract found that practices attained a high level of achievement in the first year and that this was sustained in subsequent years.[13] Analysis also showed that the incentives in the contract contributed to a reduction in inequalities in the delivery of primary care related to deprivation.[14] The benefits that resulted built on longer-term improvements in the management of chronic diseases in primary care, with some evidence of accelerated improvements for asthma and diabetes, although not for heart disease.[15]

The new contract also helped increase recruitment into primary care and was advantageous to family physicians, whose incomes increased 58 percent between 2002–03 and 2005–06. This resulted in greater-than-expected spending, as physicians achieved higher levels of performance than the 75 percent achievement against indicators estimated at the outset. A review conducted by the National Audit Office found that expenditure on family physicians increased from £5.1 billion in 2002–03 to £7.7 billion in 2005–06, making this the most expensive element of the chronic care policy.[16]

The size of the income increases attracted criticism and raised questions as to whether the contract offered value for taxpayers' money.[17] Similarly, the high level of performance achieved was interpreted as showing that the quality indicators had been set too low or had failed to allow for improvements that had already occurred. Modifications to the contract in 2006 resulted in the addition of new chronic conditions, such as chronic kidney disease, and more indicators, such as for mental health.

National service frameworks. Two other policies helped strengthen disease management. First, in a number of disease areas, the government commissioned expert groups to develop national service frameworks. These frameworks drew on available evidence to set standards for improving the quality of care. Evaluations of the impact of the NHS reforms have noted impressive improvements in performance in areas covered by the frameworks, such as heart disease and cancer services.[18]

Appraisals of new drugs. Second, the National Institute for Health and Clinical Excellence (NICE) undertook appraisals of new drugs and other health care technologies with the aim of ensuring greater consistency in their provision in the NHS; it also developed clinical guidelines to support improvements in the quality of care. These guidelines covered a wide range of conditions including diabetes, hypertension, and osteoarthritis. Studies showed that implementation of NICE guidance was uneven, reflecting the discretion available to NHS organizations to decide the level of funding to commit to implementation and the autonomy of physicians in assessing how to treat patients.[19] Nevertheless, the contribution made by NICE to improvements in health care in England led to interest in how its approach could

be adopted in the United States.[20]

■ **Case management for patients with complex needs.** *Evercare: a case management program.* Case management was identified as a high priority because of its potential to improve the quality of care for patients and to promote the more effective use of services. The Evercare program was established to pilot one approach to case management through the employment of advanced primary nurses to take responsibility for a caseload of patients with complex needs. The program was based on an approach developed in the United States that focused on providing case management support to nursing home residents. In England the Evercare pilots focused on enabling older patients with a range of chronic diseases and a history of emergency hospital admissions to live in their own homes. Patients were eligible for involvement if they were age sixty-five or older and had had two or more emergency admissions in the previous year.

An evaluation of the nine program pilots found that advanced primary nurses were valued by patients and informal caregivers. Benefits reported included altering medication to avoid adverse reactions, coordinating care to reduce fragmentation among services, and arranging access to community-based services. Analysis showed that compared with the general population, case management had no significant impact on rates of emergency hospital admission, bed days, or mortality among high-risk patients.[21] One possible explanation is that patients enrolled in the pilots were older people with a previous history of emergency hospital admissions, and evidence indicates regression to the mean in admissions in this group even in the absence of case management and other interventions.[22]

PARR: an identification tool. Partly in response to these findings, the NHS commissioned work to develop a better method for identifying patients at high risk of readmission to hospital. This resulted in the development of the patients at risk of rehospitalization (PARR) tool. PARR draws on routinely collected NHS data to produce a case-finding algorithm incorporating variables such as data on patients' previous use of the hospital and community characteristics.[23] In subsequent work, hospital data were linked with primary care data in the Combined Predictive Model to assess the likelihood that patients across a whole population would be admitted to the hospital.

The aim of PARR is to provide NHS organizations with methods for analyzing the populations they serve, to identify patients who might benefit from case management. Following a period of development, PARR is being used to identify high-risk patients and offer them case management support. A survey of NHS organizations responsible for chronic care policy found that 72 percent of those responding reported using PARR to identify high-risk patients.[24] There are no plans to evaluate the impact of PARR, so it is therefore not possible to assess how its use compares with the approach adopted in the Evercare pilots.

Nurses and primary care teams. In advance of the findings from the evaluation of the Evercare pilots, the government asked NHS organizations to appoint experienced

nurses, known as "community matrons," to work with primary care teams in providing case management support to people most at risk.[25] A target was set for 3,000 community matrons to be appointed by 2008, caring for 250,000 patients with complex needs. These were often nurses who had previously been employed in community nursing teams. NHS organizations had a large measure of discretion in deciding how community matrons should work, which led to wide variations in the model of case management used. The areas included in the Evercare pilots incorporated learning from their experience in the work of community matrons after the end of the pilot program. The emphasis placed by the government on community matrons in the NHS Improvement Plan meant that this aspect of the chronic care policy received the greatest attention within the NHS.

Case management at work. An example from South London illustrates how case management was taken forward in a project that received a national award for innovation in chronic care. In this project, community matrons established "virtual wards," each serving around 30,000 people. The community matron and multidisciplinary team used predictive models like PARR to identify which of the 30,000 residents living in an area were at highest risk of an emergency hospital admission. Of the 100 patients on each ward, five were discussed daily, thirty-five were discussed weekly, and the remaining sixty were discussed monthly. New patients were added to the ward when patients were discharged. There was a strong emphasis on care coordination focused on the multidisciplinary team providing the service and links with the practices with which patients were registered.

One of the roles of community matrons was to contribute to the target of reducing the use of emergency bed-days by 5 percent by 2008. The government set this target as part of its chronic care policy in the belief that case managers would anticipate patients' needs and help them avoid inappropriate admissions. The target was strongly influenced by evidence showing that a small proportion of patients admitted to hospitals as emergencies accounted for a large proportion of bed-day use. Analysis suggested that there was much potential for reducing the use of beds by these patients through case management and other interventions.

In fact, emergency admissions for most patients continued to rise throughout this period, although there were reductions in admissions for patients with mental health problems and those with cardiovascular conditions. Work by the Department of Health indicates that the use of crisis resolution teams may have contributed to the fall in mental health admissions, while improvements in cardiovascular services following from the national service framework for heart disease may lie behind the reductions in admissions in this area.[26] Although emergency admissions continued to rise, lengths-of-stay fell, and this meant that the target of reducing emergency bed-day use by 5 percent was achieved.[27]

■ **Emerging and related initiatives.** *Assistive technology.* A number of other initiatives contributed to the chronic care policy. First, as announced in the 2006 white paper, a pilot program was established to test the use of assistive technology to en-

able people with chronic conditions to remain at home. The focus in the program is people of any age who are perceived to be at risk of hospital admission because of heart failure, diabetes, or chronic obstructive pulmonary disease (COPD). A range of tele-health and tele-care technologies have been deployed, and their impact is being evaluated to assess the costs and benefits of these kinds of interventions. Tele-health technologies are being used to enable the remote monitoring of patients' vital signs—for example, through the use of simple biometric equipment to prompt patients to take readings for blood pressure and blood glucose—and the transmission of results to a community matron. Tele-care technologies include sensors and other devices to monitor bed occupancy and falls in patients' homes.

Care plans. Second, increasing emphasis was given to the role of care plans both for people most at risk and for others with chronic conditions who wished to take advantage of these plans. The aim is to agree on a care plan with any patient with a chronic condition who wants to have a plan by 2010. In the case of diabetes, the Year of Care program is piloting the use of care plans in three regions and will use what is learned to support implementation across the NHS. Care plans are closely connected with the pilots announced in the NHS Next Stage Review undertaken by the health minister, Lord Darzi, to enable patients to take control of a budget with which to decide the services they need to procure.[28] These pilots extend a policy already used in social care under which users are given individual budgets to make their own decisions about the services they need.

Prevention. Third, the government continued to emphasize the need to focus on the prevention of illness. The 2004 white paper *Choosing Health* identified the main public health priorities as to reduce the numbers of people who smoke, reduce obesity and improve diet and nutrition, increase exercise, encourage sensible drinking, improve sexual health, and improve mental health.[29] A number of initiatives followed, including the appointment of NHS health trainers to offer advice on healthy lifestyles, accelerated implementation of the national screening program for chlamydia, and legislation to ban smoking in public places. An independent assessment of public health priorities found evidence of progress in some areas—for example, in falling premature death rates from cardiovascular disease and cancer—but concluded that prevention had not received the same attention as other NHS objectives had. Particular concerns were expressed about rising rates of obesity and the long-term consequences for the health of the population.[30]

Information technology. Fourth, the government is investing an estimated £12.7 billion in an information technology (IT) program, Connecting for Health. The program is designed to enable NHS organizations in England to implement an electronic care record for every patient, make use of electronic appointment systems and prescribing, and support the delivery of safer care. It seeks to extend the use of an electronic care record in primary care by creating a care record that can also be accessed in hospitals and community health services. This has the potential to contribute to improvements in chronic care by strengthening links between pri-

mary and secondary care and supporting the development of coordinated care. The program is, however, behind schedule, and the most recent estimate is that the care record will be rolled out between 2009–10 and 2014–15.

Assessment: Credits And Deficits

Four years on from the NHS Improvement Plan, what does the balance sheet look like? On the credit side, self-management has established a foothold, although its coverage to date is extremely limited; disease management has led to some acceleration of long-term improvements in chronic care through the P4P contract for family physicians and has helped reduce variations in performance, albeit at a high price; and case management is offering a service that is valued by patients and caregivers, even though in the Evercare pilots it did not have the hoped-for effect on hospital use. Predictive modeling tools have been developed to enable NHS organizations to identify high-risk patients, and in some areas these are being used to support the development of innovative services such as virtual wards. Emerging initiatives such as assistive technologies and personal care plans hold promise for the future, as does the investment being made in IT.

On the deficit side, investment in the chronic care policy has been modest compared with increases in spending to support other objectives such as reducing waiting times for hospital, notwithstanding the cost of the new contract for family physicians. The high level of expenditure on the new contract illustrates the risks involved in P4P initiatives and the importance of piloting these initiatives in advance of full-scale implementation. Prevention has not received the same priority as other government objectives have gotten, and little progress has been made in achieving closer integration of primary and secondary care. Looking back on the period since the NHS Improvement Plan was introduced, the national director for primary care judges that implementation of the chronic care policy has not been as rapid or as far-reaching as he would have hoped for, although four years may be too short a time in which to offer a considered judgment.[31]

The combined effect of the policies that have been adopted remains uncertain. Even in the case of the reductions in emergency bed-day use that have occurred, the causal relationship between the initiatives pursued under the chronic care policy and the impact on service use is unclear. In retrospect, the strong emphasis placed on case management in the early stages of policy implementation appears to have been misplaced, when the evidence indicates that it is the cumulative effect of different elements in the Chronic Care Model (in its English adaptation) that is likely to have the greatest impact, rather than individual elements.[32]

Lessons For Others

■ **Act on several fronts.** A clear lesson from the experience in England is the importance of acting on several fronts simultaneously as part of a concerted effort to reorient the health care system in response to the changing burden of disease. At a

minimum, this entails properly resourced programs to move self-management and case management forward, alongside action to strengthen primary care, which remains a cornerstone of NHS chronic care policy and practice. Indeed, at a time when primary care in the United States is facing a crisis, the strength of primary care in England appears to be an increasingly valuable asset.

■ **Match the rhetoric to appropriate reform strategies.** Another lesson is the need to support implementation of chronic care policies with appropriate reform strategies. The conflicts and tensions in government policy are well illustrated by the emphasis placed on requiring NHS hospitals to compete for patients and on paying hospitals based on the activity they undertake. Competition and activity-based reimbursement were given priority to increase the numbers of patients receiving hospital treatment, thereby reducing waiting times for procedures such as total hip replacements and cataract surgery.

The aims of the chronic care policy point in a different direction than these objectives, being more concerned to enable people with chronic conditions to avoid hospital admission by supporting them in living independently at home. These aims require incentives for family physicians and their teams to provide more care out of the hospital and to give priority to the prevention of illness or its exacerbation. The chronic care policy also requires steps to be taken to overcome the division between family physicians and specialists that inhibits the development of integrated approaches to care.

These points were recognized and led to the development of policies such as practice-based commissioning, which offers groups of primary care practices the opportunity to provide more care in the community by reducing their use of hospitals and using the resulting savings to expand their services. In reality, practice-based commissioning has failed to engage primary care teams on a sufficient scale to drive services out of the hospital. One of the reasons was the timing of its introduction on the back of the new P4P contract for family physicians. The incentives contained within the contract to increase personal incomes were much stronger than those available under practice-based commissioning, and the contract therefore took precedence. It is difficult to envisage how practice-based commissioning can be made more attractive when family physicians have experienced such large increases in incomes under their contract.

Similarly, the rhetoric to integrate care contained in *Our Health, Our Care, Our Say* was not matched with reform strategies to make this happen. Services that were already fragmented through the separation of primary and secondary care risked becoming increasingly fractured as government promoted greater plurality of service provision by procuring extra treatment capacity from independent-sector treatment centers to support patient choice and reduce waiting times for treatment. The only exceptions were in areas where case managers worked with primary care teams to strengthen care coordination, as in the virtual wards project, and where local leaders had been exposed to examples of integrated care outside

England and sought to adapt the lessons learned in their areas.

■ **Establish partnerships among providers.** Most of these examples were from the United States, and they included a partnership with Kaiser Permanente to support the NHS in overcoming divisions between family physicians and hospital-based specialists. The need to establish such a partnership in a single-payer system is indicative of the barriers to reorienting health systems to meet the challenge of chronic care, even where many of the fundamental building blocks are in place. These scattered examples of integration will need to be scaled up if the integrated care pilots proposed in Lord Darzi's NHS Next Stage Review are to succeed.

TO MAKE THESE POINTS IS NOT TO ARGUE that policies on competition and paying hospitals for activity were wrong. Rather, it is to suggest that they were one-eyed in a context where government was pursuing multiple objectives, each of which called for different means of implementation. The final lesson from the English experience is therefore that the enunciation of chronic care policies needs to combine a focus on the "what" (self-management, disease management, and case management) and the "how" (the incentives and organizational forms needed to implement these policies). In view of the multiplicity of reform objectives, implementation requires nuanced approaches that recognize the role that competition plays in some areas of care and collaboration in others.[33]

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