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Integrated Care Experiences And Outcomes In Germany, The Netherlands, And England

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ABSTRACT Care for people with chronic conditions is an issue of increasing importance in industrialized countries. This article examines three recent efforts at care coordination that have been evaluated but not yet included in systematic reviews. The first is Germany's *Gesundes Kinzigtal*, a population-based approach that organizes care across all health service sectors and indications in a targeted region. The second is a program in the Netherlands that bundles payments for patients with certain chronic conditions. The third is England's integrated care pilots, which take a variety of approaches to care integration for a range of target populations. Results have been mixed. Some intermediate clinical outcomes, process indicators, and indicators of provider satisfaction improved; patient experience improved in some cases and was unchanged or worse in others. Across the English pilots, emergency hospital admissions increased compared to controls in a difference-in-difference analysis, but planned admissions declined. Using the same methods to study all three programs, we observed savings in Germany and England. However, the disease-oriented Dutch approach resulted in significantly increased costs. The *Kinzigtal* model, including its shared-savings incentive, may well deserve more attention both in Europe and in the United States because it combines addressing a large population and different conditions with clear but simple financial incentives for providers, the management company, and the insurer.

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People who have chronic diseases need a long-term response coordinated by different health professionals, especially if multiple disorders occur in parallel. To address the needs of patients with chronic diseases, many countries have experimented with integrated care models in an attempt to overcome the known shortcomings of treatment by different providers in an episodic manner.

No generally accepted definition of *integrated care* exists. However, care coordination; case management; self-management support; and care by multidisciplinary clinical pathways,

teams, or both are—to varying degrees and in different combinations—important components of integrated care models.^{1,2} In short, as Ingrid Mur-Veeman and coauthors write, “Integrated care is...an organizational process of coordination that seeks to achieve seamless and continuous care, tailored to the patient’s needs, and based on a holistic view of the patient.”³

The aims of integrated care are clear: to improve outcomes, patient experience, and efficiency. But how this is best achieved, which target groups would benefit most from which types of interventions, and what role financial incentives play in helping achieve the objectives are

not well understood. Integrated care has been discussed extensively in both Europe and the United States, where the terminology has shifted from *integrated delivery networks* to *accountable care organizations*.⁴

Systematic reviews have assessed the evidence about the effects of integrated care models, and a number of reviews of these reviews have been completed. For example, Marielle Ouwens and coauthors looked at reviews of integrated care models published between 1996 and 2004,¹ and Ellen Nolte and Emma Pitchforth looked at studies of integrated care models from 2004 to 2012.²

We examined newer European approaches to integrated care that have not yet been analyzed in publications included in such systematic reviews. We conducted this examination to gain insights into whether newer integrated care models achieved the stated objectives and, if so, what were the crucial factors in the models' success.

We examined only integrated care approaches that had been evaluated using both control groups (most often defined as *care as usual*) and, to the extent possible, measurements before and after the start of the intervention.⁵ Often the two approaches are combined in a difference-in-differences approach, in which changes in the intervention group before and after an intervention are compared to a control group during the same time. Some of the evaluations were published in journals. Others have so far been published only as "grey literature"—for example, as project reports by the organizations responsible for the evaluation.

To achieve these objectives, we contacted experts and searched the Internet for examples. We excluded some interesting approaches because they were very narrow (including only a few patients or limited interventions) or had not been evaluated.⁶ For each example included, we provide details on the target populations (Exhibit 1) as well as on the methods and data sources, which included administrative data (often used to analyze processes, utilization, outcomes, and costs) and surveys and interviews (used to examine patient and provider experience) (Exhibit 2). Further details are given in Appendix Exhibit 1.⁷ We then report on intermediate clinical outcomes and mortality, use of hospital care, process indicators, patient experience, provider experience, and costs (Exhibit 3; for further details, see Appendix Exhibit 2).⁷

The rest of the article follows a country-by-country approach. We briefly explain the policy environment for the integrated care models and then describe the organizational features, interventions, and incentives used.

Germany: A Population-Based Approach

The "sectorization" of health care delivery (especially between ambulatory and inpatient care) in Germany has been recognized as a major obstacle to improving care for patients with chronic conditions.⁸ New provisions for so-called integrated care were introduced in German statute in 2000, with the aim of improving cooperation between ambulatory care providers and hospitals. The terms of such cooperation are spelled out in contracts between sickness funds (insurers) and individual providers or groups of providers from different sectors.

In 2004 a law removed existing barriers to developing and implementing integrated care models and provided financial incentives for both sickness funds and providers to proceed with such models. A substantial number of integrated care models have been developed since then.

In spite of great euphoria among sickness funds and providers during the start-up phase, the implementation of integrated care models has progressed slowly. Spending on care provided through integrated care contracts has accounted for less than 1 percent of total expenses on health care. This is the case even though the estimated number of integrated care contracts in 2011 looked impressive: 6,300 contracts between sickness funds and provider groups that collectively cared for 1.9 million people.⁹ However, many contracts are limited to rehabilitation care, ambulatory care following surgery, or both.

The central goal of the integrated care models—to better coordinate, and potentially integrate, care across sectors for people with chronic diseases to improve their experiences and outcomes—has scarcely been addressed. The well-known disease management programs—which combine clinical guidelines, quality assurance measures, and training of and information for providers and patients⁸—address only single chronic conditions, but many of the participants in such programs have multiple morbidities.

Gesundes Kinzigtal (GK)—literally, Healthy Kinzig Valley—is an exception. The only truly population-based integrated care approach in Germany, it organizes care across all health service sectors and indications for people of all ages and care needs.

Gesundes Kinzigtal GmbH, which runs this integrated care system, is a joint venture. One partner is the Hamburg-based health management company OptiMedis AG, which was founded in 2003 and holds one-third of the shares in the venture. The second partner is the Medizinisches Qualitätsnetz—Ärzteinitiative Kinzigtal (literally, Medical Quality Net-

work—Physicians Initiative Kinzigtal), which has more than forty physician members, was founded in 1993, and holds two-thirds of the shares.

Since January 2006 Gesundes Kinzigtal GmbH has been contractually accountable for the whole health care service budget for nearly half of the 69,000 inhabitants of the Kinzigtal region in southwestern Germany (Exhibit 1). These people are insured by one of two participating sickness funds: Allgemeine Ortskrankenkasse (AOK) Baden-Württemberg (about 29,300 insured in Kinzigtal) and Landwirtschaftliche Krankenkasse (LKK) (about 1,700 insured).¹⁰ However, fewer than half of them have actively enrolled in GK.

GK cooperates with almost a hundred providers, including general practitioners, specialists, hospitals, psychotherapists, nursing homes, ambulatory home health agencies, and physiotherapists. Additionally, GK has agree-

ments with pharmacies, health and sports clubs, gyms, companies with workplace health promotion programs, adult education centers, self-help groups, and local governments.

FINANCIAL INCENTIVES GK’s financial goal is to improve the margin for the contracting sickness funds. Achieving this involves realizing savings within the Kinzigtal region in relation to German standardized costs and to a reference period before the intervention.

Standardized costs are average costs across all sickness funds. They are used in the so-called risk structure compensation mechanism, which allocates money from a central pool to the approximately 130 sickness funds in Germany. The pool is managed by the Federal Insurance Authority (Bundesversicherungsamt, or BVA), a governmental body, and all insured people in the country pay a percentage of their income into the pool. Since 2009, allocations for each insured person have been determined by age, sex, and

| EXHIBIT 1 | | | | |
|--|---|--|--|--|
| Characteristics Of Integrated Care Interventions In Three European Countries | | | | |
| Intervention | Location | Target population | Time frame | Funding or financial incentives |
| GERMANY | | | | |
| Gesundes Kinzigtal (GK) | Kinzigtal Valley, Baden-Württemberg | General population (regardless of disease or age) insured by one of two insurers (almost 50% of 69,000 inhabitants) | Since January 2006 | All providers (regardless of location or whether they are affiliated with GK) are paid by insurer in usual ways; total expenditure for all insured inhabitants is compared to risk-adjusted standardized costs, and insurer and GK share savings |
| NETHERLANDS | | | | |
| Bundled payment system | Nationwide | Patients with diabetes, cardiovascular disease, or chronic obstructive pulmonary disease (COPD) | Since January 2007 for diabetes; since January 2010 for cardiovascular risk management; since July 2010 for COPD | Disease-specific care groups receive single bundled payment for all included disease-specific services; other services are paid by insurer in the usual way |
| ENGLAND | | | | |
| 16 integrated care pilots (ICPs) | 16 areas across England | Differing, including the elderly (11 ICPs); people with chronic conditions, especially if at risk for hospital admission (7 ICPs); people with dementia or mental health problems (4 ICPs); people at risk of falling (3 ICPs); and people needing end-of-life care (3 ICPs) | April 2009–March 2011 | \$127,000–\$289,000 per ICP from Department of Health to cover start-up costs, evaluation activity, and other expenses resulting from participation in the pilot program |
| North West London ICP | 6 London boroughs: Brent, Ealing, Hammersmith and Fulham, Hounslow, Kensington and Chelsea, and Westminster | The elderly and people with diabetes | Since May 2011 | \$16.6 million from the London Strategic Health Authority for governance, salaries and infrastructure of support team, and development and implementation of data-sharing platform |

SOURCE Authors’ analysis. **NOTES** For further details on target populations, see Appendix Exhibit 1 (see Note 7 in text). For further details on funding or financial incentives, see the text and appropriate notes.

EXHIBIT 2

Methods And Data Sources For Evaluated Dimensions Of Integrated Care Interventions in Three European Countries

| Intervention | Process or administrative data | Surveys | Interviews |
|-----------------------------------|---|---|---|
| GERMANY | | | |
| Gesundes Kinzigtal (GK) | Health outcomes, patients leaving insurance, costs (from administrative claims data of all GK-enrolled and matched controls, using propensity score matching); ^a use and cost of hospital care (from statutory health insurance data for people from Kinzigtal and controls) ^b | Patient experience (from postintervention questionnaire); ^c provider experience (from annual questionnaire) ^d | — ^e |
| NETHERLANDS | | | |
| Bundled payment system (diabetes) | Process and health outcomes (from patient record data); ^f use of hospital care and costs (from nationwide insurance claims data) ^g | Patient experience (from postintervention questionnaire) ^f | Provider experience (from semistructured interviews with stakeholders) ^f |
| ENGLAND | | | |
| 16 integrated care pilots (ICPs) | Use of hospital care (from Hospital Episode Statistics [HES] for cases and matched controls); ^{h,i} costs (estimated from HES data by applying payment by results tariffs) ^{h,i} | Patient experience (from patient or service user surveys before and after an intervention); ^{h,i} provider experience (from staff surveys early and late in the evaluation) ^{h,i} | — ^e |
| North West London ICP | Use and costs of hospital care (from HES and other administrative data to select controls); ^j process and health outcomes for patients with diabetes only (from patient-level data in general practice computer systems; inpatient, outpatient, and emergency department care, and community information data sets from local trusts; social care data from local authorities); ^{k,l} dementia diagnoses and care plans (from ICP primary care data) ^l | Patient experience (from survey of service users enrolled in the pilot); ^m provider experience (from survey of professionals) ^k | — ^e |

SOURCE Authors' analysis of items in the exhibit footnotes, which are cited in full in the notes in the text (exact endnote numbers are referenced only when more than one source exists with the same author name and year). **NOTE** For further details on the methods and data, see Appendix Exhibit 1 (Note 7 in text). ^aSchulte et al., 2012. ^bKöster et al., 2011. ^cZerpien et al., 2013. ^dSiegel and Stössel, 2012. ^eNot applicable. ^fStruijs et al., 2012 (Note 19 in text). ^gStruijs et al., 2012 (Note 21 in text). ^hRoland et al., 2012. ⁱRAND Europe and Ernst and Young, 2012. ^jBardsley et al., 2013 (Note 28 in text). ^kCurry et al., 2013. ^lSoljak et al., 2013. ^mPappas et al., 2013.

expenditures attributed to any of eighty chronic or high-cost preexisting disease.¹¹

The contracts between Gesundes Kinzigtal GmbH and the two sickness funds are based on the “virtual” budget of each fund’s total allocation from the central allocation pool. The budget is “virtual” because the money is not actually passed through GK to providers. Instead, providers continue to receive their reimbursements from the sickness funds as usual. If a sickness fund spends less on care for its insured Kinzigtal population—whether or not the care comes from a participating provider—than it receives from the pool, the respective fund and GK share the difference.¹⁰

INTERVENTIONS GK’s care and preventive programs target common chronic diseases that have a large effect on patients’ health status and for which effective interventions are available. The activities are performed according to a set of principles described below.

► **INDIVIDUAL TREATMENT PLANS AND GOAL-SETTING AGREEMENTS:** Whenever an enrolled

patient has been identified as being at risk for a certain disease—for example, during the comprehensive checkup that routinely follows enrollment—doctor and patient are supposed to develop an individual treatment plan and to agree upon treatment goals. GK teaches physicians how to improve their case management and provides additional services for the patients, such as education programs.

► **PATIENT SELF-MANAGEMENT AND SHARED DECISION MAKING:** By supporting patients’ self-help and self-management activities, and by training doctors in shared decision making, GK attempts to support patients’ active participation. In addition, a patient advisory board and a patient ombudsman ensure that patients’ perspectives are carefully considered before important decisions are made by GK.

► **FOLLOW-UP CARE AND CASE MANAGEMENT:** The lack of coordination of follow-up care after patients’ discharge from a hospital or rehabilitation facility is an obvious shortcoming of the German system. By facilitating the cooperation

EXHIBIT 3
Highlights Of Evaluation Results Of Integrated Care Interventions In Three European Countries

| Intervention | Patient | | | | Provider experience | Costs per patient per year |
|----------------------------------|---|---|---|--|---|---|
| | Intermediate clinical outcomes and mortality | Use of hospital care | Process indicators | Patient experience | | |
| Germany | | | | | | |
| Gesundes Kinzigtal (GK) | Decreased: mortality (2.5 years after enrollment) ^a | Increased: admissions; decreased: length-of-stay | | Improved: fewer changes in insurers | Improved: cooperation | −\$203 |
| The Netherlands | | | | | | |
| Bundled payment system | Improved: control of blood pressure and cholesterol; increased: HbA1c; decreased: BMI | Decreased: specialist care | Increased: four checkups, foot/kidney exams; decreased: eye testing | Cooperation and coordination: >90% good or excellent | Improved: perceived quality, patient-centeredness | +\$388 |
| England | | | | | | |
| 16 integrated care pilots (ICPs) | | Increased: emergency admissions; decreased: elective admissions and outpatient admissions | | Improved: care plans/follow-up; decreased: listening to and involving patients, preferences taken into account | Improved: teamwork, communication, job depth and breadth | −\$358 ^b −\$93 ^c |
| North West London ICP | Improved: control of cholesterol improved; unchanged: HbA1c | No significant change in first year | Improved: care plans, diabetes testing | “Good idea,” but “actual effect minimal” | Improved: interprofessional learning and collaboration, but deemed “time-consuming” | No significant change in first year |

SOURCE Authors' analysis of results from the following sources (exact endnote numbers are referenced only when more than one source exists with the same author name and year): Schulte et al., 2012; Köster et al., 2011; Zerpies et al., 2013; Siegel and Stössel, 2012; Struijs et al., 2012 (Note 19 in text); Struijs et al., 2012 (Note 21 in text); Roland et al., 2012; RAND Europe and Ernst and Young, 2012; Curry et al., 2013; Nuffield Trust, 2013; and Pappas et al., 2013. **NOTES** Dark green indicates a significant positive result (for integrated care versus control). Light green indicates a generally positive result, which may be statistically significant for certain subresults. Yellow indicates mixed positive and negative results. Red indicates a significant negative result. Further details on the results (including the quotes) are in Appendix Exhibit 2 (see Note 7 in text). HbA1c is glycosylated hemoglobin. BMI is body mass index. ^aTwo and a half years after enrollment, mortality among Kinzigtal inhabitants who had joined the program was 1.76 percent, compared with 3.74 percent among those who had not. ^bBased on six pilots. The value shown is the sum of values from mixed results on several components: emergency admissions, \$276; elective admissions, −\$529; and outpatient care, −\$106 (all dollar amounts are rounded). ^cBased on fifteen pilots. The value shown is the sum of values from mixed results on several components: emergency admissions, \$143; elective admissions, −\$204; and outpatient care, −\$32.

of hospitals with other providers via jointly developed care pathways, synchronizing medications across formularies specific to hospitals and ambulatory care providers, and using common electronic health records across the sectors of care, GK aims to facilitate better coordinated follow-up care. The patient's "doctor of trust" (chosen by the patient as his or her medical home), who is not necessarily a general practitioner, takes charge of follow-up care.

►**SYSTEMWIDE ELECTRONIC HEALTH RECORD:** Partner providers have access to patients' electronic health records if the patient—as the owner of his or her data—has granted that access. The diagnostic and treatment information

in the record is encrypted.¹²

EVALUATION METHODS GK has commissioned several independent research institutions to conduct evaluations, which have been coordinated by the university-based agency Evaluating Kinzigtal Integrated Care.¹⁰ A summary of data sources used in the evaluations of the various dimensions is provided in Exhibit 2 (details are available in Appendix Exhibit 1).⁷

The evaluations compared different groups. Specifically, Timo Schulte and coauthors compared Kinzigtal inhabitants enrolled in the integrated care system with those who had not enrolled by a particular point in time—using careful propensity score matching—to examine

mortality rates, contribution margins (the difference between standardized costs and actual expenditures), and acceptance of the model.¹³

Ingrid Köster and coauthors mainly focused on comparisons of the whole population of Kinzigtal (independent of people's enrollment status) with people living in other regions of Baden-Württemberg.¹⁴ These authors note that because of the ongoing recruitment process and the fact that people could enroll in the intervention while the evaluation was being conducted, continuous changes were occurring in the composition and size of the intervention and control groups during the evaluation. Thus, they argue that the Kinzigtal population as a whole is more homogeneous over time than the insured who are enrolled in the integrated care system.

EVALUATION RESULTS Exhibit 3 summarizes some of the results that have become public in various publications (for additional results, see Appendix Exhibit 2).⁷ Probably the most striking result is the difference in mortality rate: It was reduced by half 2.5 years after enrollment among those who were enrolled in the integrated care program, compared to those who were not. Among those who had enrolled, 1.76 percent had died; the rate was 3.74 percent among those not enrolled.¹³

Because of the careful propensity score matching approach used in this evaluation, this result is not the result of selection bias. This conclusion is further supported by the fact that even after the exclusion of deaths in the first six months (to take into consideration the fact that terminally ill people were not enrolled), the difference was still almost as large (1.59 percent versus 2.94 percent). The average age at death was 1.4 years earlier among people who had not enrolled (76.6 years) than among those who had (78.0 years).¹³

Patients' and providers' experiences were found to be positive as well: Almost all patients and 80 percent of providers would join GK again,^{15,16} and significantly fewer enrolled people left their sickness fund and joined another one, compared to people who were not enrolled (Exhibit 3).¹³ So was the cost trajectory, or at least the contribution margin—the difference between what the insurer gets from the central health fund pool and its spending. In the first three years after the start of integrated care, the margin improved by €151 (US\$203) per person per year in the integrated care population, compared to the nonenrolled population.

The Netherlands: Bundled Payments For Single Chronic Diseases

Numerous initiatives to improve the effective-

ness and quality of care for people with chronic conditions have been implemented in recent years in the Netherlands. Many of the initiatives involve multidisciplinary cooperation, both among physicians and between physicians and other health care professionals. The fragmented funding structures of the respective components of care and the difficulties in securing funds for components that do not directly involve treatment or care were among the challenges that needed to be overcome.¹⁷

In 2007 the Netherlands began experimenting with a bundled payment approach for ten care groups for diabetes, which received a bundled payment for this care.¹⁸ Without waiting for the findings of an evaluation of this approach, the country's Parliament voted in September 2009 to implement ongoing bundled payment programs for both type 2 diabetes and cardiovascular risk management, starting in January 2010, and for chronic obstructive pulmonary disease, starting in July 2010 (Exhibit 1).

In response to a parliamentary request, the health minister created the Bundled Payment Evaluation Committee in 2010. The committee was charged with monitoring developments and reporting periodically to the minister during the next three years on progress in implementing bundled payment programs and on whether the intended effects had become evident.¹⁹

FINANCIAL INCENTIVES AND CARE STANDARDS

The bundled payment system makes it possible for different elements of care for specific chronic diseases to be purchased, delivered, and billed as a single product or service. In contrast, services and goods for all other diseases remain outside of the bundled payment contracts.

Health insurers, which are responsible for running the statutory health insurance system but which compete with each other, pay a single fee to a principal contracting entity—the care group—which serves as the general contractor and is responsible for organizing all diabetes care and ensuring its delivery. Often owned by general practitioners, the care groups either deliver the various components of care or subcontract with other health care providers—such as general practitioners, laboratories, dietitians, and specialists—to deliver them. The price for each bundle of services is negotiated between the insurer and the care group, and the fees for the subcontracted providers (if any) are negotiated between them and the care group.¹⁸

The negotiations on the content of care that is included in the bundle are driven by care standards that are jointly developed—and whose use is jointly authorized—by caregiver organizations, patient associations, and public health authorities. Insurers are consulted during the develop-

ment of the standards, which are based mainly on existing medical guidelines, protocols, and performance indicators.²⁰

The interventions described in the care standards are categorized into general and disease-specific modules. The general modules include interventions such as physical activity programs and smoking cessation support that are applicable to all chronic conditions. The disease-specific modules are additions to the general modules and are specifically targeted to particular chronic conditions. These modules are subdivided according to four phases of care: early detection and prevention; diagnosis; individual care plan and treatment; and coordination, rehabilitation, participation, and secondary prevention.²⁰

The Dutch approach has incentivized collaboration among physicians on a routine rather than voluntary basis, as was the case earlier.¹⁸ It has also reassigned tasks both from specialists to general practitioners and from physicians to nurses.¹⁹

EVALUATION The National Institute for Public Health and the Environment was charged with evaluating the care groups. It used patient records and insurance claims data (including for a control group of patients not cared for by the care groups), as well as surveys of patients and interviews with stakeholders^{19,21} (Exhibit 2 and Appendix Exhibit 1).⁷

As Exhibit 3 and Appendix Exhibit 2⁷ show, results of the diabetes care groups were mixed. There was improvement in many process parameters, such as patients' receiving regular checkups and foot examinations. However, the rate of annual eye tests declined.

Intermediate clinical measures also showed mixed results. Some, such as blood pressure and cholesterol, improved; for others there was no change or a negative change. Both patients' and providers' experiences were positive.

Use of hospital-based specialist care for diabetes declined by almost 25 percent, which resulted in savings of US\$47 per patient per year, compared to the control group. However, total costs for specialist care increased by US\$189 more than in the control group, perhaps because patients in the intervention group were referred to specialists later, when they needed more complex care. Total annual costs per patient increased by US\$388 more than in the control group (Exhibit 3).²¹

England: Integrated Care Pilots For Various Groups

The 2008 National Health Service (NHS) "Next Stage Review"²² articulated the need for better coordination and integration of previously frag-

mented services to provide supportive, person-centered care—which, in turn, would facilitate earlier and more cost-effective interventions. The English Department of Health thus invited applications from health care organizations to propose innovative approaches to providing better integrated care, given concerns that care was becoming more fragmented, especially for older people.

The new integrated care organizations were meant "to achieve more personal, responsive care and better health outcomes for a local population."²² However, no blueprint was given on how integration was to be achieved. In 2009 the Department of Health selected and modestly funded sixteen integrated care pilots (ICPs) that took a wide range of approaches to integration.²³

SIXTEEN SELECTED INTEGRATED CARE PILOTS

Despite the variation inherent in the sixteen separate pilot projects, some commonalities could be seen (Exhibit 1; for further details, see Appendix Exhibit 1).⁷ Nearly all of the ICPs provided a great deal of primary care, which may seem obvious since in England general practitioners provide care for people who register to have a particular practitioner manage their health care. The practitioners serve as gatekeepers to the rest of the health care system. Thus, general practitioners constitute a useful level at which to coordinate care.

In addition to general practitioners, most ICPs involved multiple other organizations, both within the NHS (such as hospitals) and external to it (such as social services agencies). The pilot projects targeted varying populations and conditions. Some focused on a single condition, but most addressed a range of conditions.

Most of the pilot projects adopted an approach that identified populations at risk. The risk in question varied from pilot to pilot, with the most common being risk of emergency hospital admission, dementia, or mental health problems (see Appendix Exhibit 1 for a list of all the targeted indications).⁷

The chosen interventions also varied. However, a common feature was the use of an integrated or multidisciplinary team. Implementation strategies ranged from regular meetings of different professionals involved with the same patients to setting up a single multiprofessional team that worked in the same building and provided both medical care and social services.

Several pilot projects implemented "virtual wards," a forum in which a number of professionals from different specialties and organizations discuss a patient. Methods by which patients were identified for admission, processes for operating virtual wards, and the level of intensity of patient care varied among ICPs.²⁴

EVALUATION RAND Europe and Ernst and Young conducted a real-time evaluation of the sixteen ICPs, using Health Episode Statistics, a data warehouse containing details of all admissions, outpatient appointments, and emergency department visits at NHS hospitals in England (for the patients within ICPs and control groups) as well as patient and staff surveys (Exhibit 2 and Appendix Exhibit 1).^{7,24} Additional evaluations are available that were restricted to specific portions of the pilots.

For instance, Martin Roland and coauthors reported results based solely on six ICPs that focused on intensive case management of elderly people who were at risk of emergency hospital admission.²³ And the Nuffield Trust analyzed the impact on hospital activity in eleven ICPs in which possible changes in hospital admissions were seen as a relevant outcome.²⁵

Exhibit 3 shows the main available findings (for details, see Appendix Exhibit 2).⁷ RAND Europe and Ernst and Young summarized their findings as follows: “Integrated care led to process improvements such as an increase in the use of care plans and the development of new roles for care staff. Staff believed that these process improvements were leading to improvements in care, even if some of the improvements were not yet apparent.”^{24(p iii)}

The evaluators pointed out that patients did not, in general, share the sense of improvement. The evaluators believed “that the lack of improvement in patient experience was in part due to professional rather than user-driven change, partly because it was too early to identify impact within the timescale of the pilots, and partly because, despite having project management skills and effective leadership, some pilots found the complex changes they set for themselves were harder to deliver than anticipated.” They also speculated “that some service users (especially older patients) were attached to the pre-pilot ways of delivering care, although we recognize this may change over time.”^{24(p iii)}

A key aim of many pilots was to reduce the use of hospital care. The evaluators found no evidence of a general reduction in emergency admissions. However, there were reductions in planned admissions and in outpatient appointments with specialists.

In spite of the mixed results, the National Collaboration for Integrated Care and Support (which includes the NHS as well as other organizations) announced a second round of integrated care projects in May 2013. Local jurisdictions were invited to demonstrate the use of ambitious and innovative approaches to deliver person-centered, coordinated care and support in what was called the pioneers program. In Novem-

ber 2013 fourteen such pioneers were chosen. The first evaluation results will be available in mid-2015 at the earliest.

NORTH WEST LONDON INTEGRATED CARE PILOT

Among the pioneers is the North West London ICP, which had been established in 2011. It was originally planned to run for one year only, but its term was extended. The ICP was started by clinicians and funded with US\$16.6 million by the London Strategic Health Authority.²⁶ It brought together organizations from the community and the sectors of social services and primary, secondary, and mental health care.

The North West London ICP provided coordinated, multidisciplinary care to approximately 22,800 residents ages seventy-five and older and to roughly 15,200 residents of any age with diabetes (some 8,700 patients fell into both categories). It included two hospitals, two mental health care providers, three community health care service providers, five municipal providers of social services, two nongovernmental organizations, and 103 general practitioners. It operated as a network, in which separate provider organizations worked together toward common goals according to a set of contractual agreements they had signed upon joining the ICP.²⁶

The goals of the North West London ICP were to improve outcomes for patients; provide access to better, more integrated care outside the hospital; reduce unnecessary hospital admissions; and allow professionals to work effectively across provider boundaries.²⁷ Various approaches were used at different levels in order to achieve these goals.

First, general practitioners were expected to create care plans for all patients in the ICP. These plans were intended to increase standardization and disseminate best practices across the ICP. The development of care plans was enabled by an ICP-wide web-based platform that also made it possible for all provider organizations to share their plans. The web-based platform also collected and displayed utilization data across providers and allowed for the identification of patients needing intensive case management.

Second, the ICP was divided into ten multidisciplinary groups, each of which included 5–17 general practitioner practices. The groups were established to improve care coordination across different services, particularly for patients at high risk of hospitalization. Besides general practitioners, the groups included district nurses, specialist physicians, social workers, and members of other professional disciplines. The groups regularly reviewed their own performance.

Third, representatives of all organizations involved were invited to attend the monthly meet-

ings of the Integrated Management Board. Participating organizations can send representatives to the meetings or not as they choose. However, attending can be beneficial. For example, organizations that sent representatives received extra payment to compensate for the extra staff time required to attend meetings of the multidisciplinary groups and produce the care plans.

EVALUATION Although the North West London ICP only began in 2011, extensive evaluations of diverse outcome indicators have already been conducted and published (Exhibits 2 and 3; for further details, see Appendix Exhibits 1 and 2).^{7,26–30} Similar to other integrated care evaluations, these found mixed results, with improvements in process parameters and some intermediate outcomes (especially patients' cholesterol levels). Patients were generally positive about the idea of service integration. So were health care professionals, who experienced enhanced interprofessional learning, clinical knowledge, and collaborative working.²⁶ However, patients felt minimal actual effects, and there were no apparent changes in use or costs during the first year.^{26,29}

Conclusion

This article has described developments toward integrated care in three European countries, concentrating on approaches that have been carefully evaluated in regard to processes, outcomes, utilization, costs, and the experiences of patients and providers. As Annalijn Conklin and coauthors noted,⁵ most other approaches have not been properly evaluated, and even those that have been used designs that lacked a control group. Therefore, our first conclusion is that

any pilot aimed at improving care coordination should have as a central feature a well-designed evaluation that would help others learn from its experience.

Many intermediate clinical outcome measures, process indicators, and patient and provider experiences improved under the approaches examined here. However, this was not always the case. For example, in England, participants felt that they were less involved and that their preferences were less often taken into account. Also in England, emergency hospital admissions rose, while planned admissions and specialist care decreased. However, the savings were larger than the additional costs.

Overall savings were also observed in Germany. However, in the Netherlands, the slightly reduced costs for diabetes care were surpassed by higher costs for other care, which resulted in significantly higher overall costs.

Both the Netherlands and Germany applied financial incentives, using bundled payments and shared-gain arrangements, respectively. However, the Dutch focus on only one disease seemed to allow the shifting of costs to providers and services not included in the bundled payment—a result that was not possible in Germany. Therefore, our second conclusion is that the German integrated care program, which targeted roughly 50 percent of the population in a well-defined area regardless of people's age or health status, deserves to be more closely studied by researchers and policy makers in the United States as they search for solutions to help accountable care organizations overcome the weaknesses of fragmentation, find appropriate financial incentives, and meet the needs of people with chronic conditions. ■

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NOTES

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