

Conference proceedings

## **Integrated care and the management of chronic illness: reflections on the proceedings of the 8th Annual Integrated Care Conference 2008**

*Nick Goodwin, PhD, Chair, International Network of Integrated Care and Senior Fellow, Health Policy, King's Fund, London, UK*

*Dennis Kodner, PhD, Professor of Medicine and Gerontology, New York College of Osteopathic Medicine of New York Institute of Technology (NYIT) and Director, NYIT Center for Gerontology and Geriatrics, New York, USA*

*Jennifer Smith, Business Manager, International Network of Integrated Care, University Library Utrecht, Utrecht, The Netherlands*

*Erika Manten, Managing Editor, International Journal of Integrated Care, University Library Utrecht, Utrecht, The Netherlands*

*Correspondence to: Nick Goodwin, PhD, Chair, International Network of Integrated Care and Senior Fellow, Health Policy, King's Fund, 11-13 Cavendish Square, London, W1G 0AN, UK, E-mail: [ngoodwin@kingsfund.org.uk](mailto:ngoodwin@kingsfund.org.uk)*

---

### **Introduction**

The 8<sup>th</sup> Annual Integrated Care Conference held in Gothenburg, Sweden, on the 6<sup>th</sup> and 7<sup>th</sup> of March 2008 welcomed over 100 researchers, policy-makers, managers and practitioners from 20 countries to exchange knowledge, to share experiences and to generate new ideas on subjects related to integrated care and the management of chronic illness. In total, the conference included five key-note presentations, 24 oral papers, one symposium session and five poster papers. This paper provides a summary and reflections on these conference proceedings.

### **Background**

The roots for this conference can be traced back to the original planning for the establishment of the *International Journal of Integrated Care* (IJIC) which included what was to become recognised retrospectively as the 1<sup>st</sup> Annual Conference in Almere, Netherlands, in March 2000. At this meeting, primarily academic colleagues from Europe and North America discussed proposals to develop and pioneer an electronic-based journal on the up and coming subject of integrated care. It was clear at this original meeting that a series of European-based annual conferences should be developed with the purpose of generating submissions to IJIC and developing a community of interested individuals in the field of integrated care. By

the 4<sup>th</sup> Annual Conference in Birmingham, UK, in 2004, the *International Network of Integrated Care* (INIC) was launched to support the activities of the Journal and bring together an international community of researchers, policy analysts, managers and professionals who held a common belief that the greater integration of care provision can lead to better quality, more cost-effective care. In 2007, the *International Foundation for Integrated Care* was created that formally brought together the management of IJIC and INIC under a single organizational structure supported by the services of the University of Utrecht Library (Table 1).

### **Conference aims**

With an ageing population and the ever increasing prevalence of both chronic and long-term illness an international challenge has been established for the management and integration of health and social care. The need for new care models and new technologies to support long-term care needs has never been greater, whilst the management challenge requires the fostering of new forms of clinical and inter-organisational partnerships and networks and the promotion of care support strategies within the home environment. For these reasons, the 8<sup>th</sup> Annual Conference in Gothenburg, Sweden selected the important and pertinent issue of integrated care for people with long-term chronic illness as its core theme.

**Table 1.** INIC Annual Conferences, 2000–2008.

2000	Almere, Netherlands
2001	Maastricht, Netherlands
2002	Strasbourg, France
2003	Barcelona, Spain
2004	Birmingham, UK
2005	Dublin, Ireland
2006	London, UK
2008	Gothenburg, Sweden

## Conference organization

The conference was organized by the *International Network of Integrated Care* in partnership with the University of Gothenburg and with the support of the conference hosts in Gothenburg—Region Västra Götaland—an administrative region with responsibility for health and medical care as well as regional development and culture.

### Local organisation committee

To oversee the logistical delivery of the conference, and to organise cultural and social events, a local organising committee was also established. This comprised:

- Britt-Marie Brinkmo—Director, County Council of Halland;
- Bibbi Carlsson, Chairman of the Primary Health Care Board, Gothenburg, Region Västra Götaland;
- Bo Hallin, Healthcare Strategist, Regional Secretariat, Region Västra Götaland;
- Elisabeth Hajtowits, Chief of Research and Development, Göteborg Region Association of Local Authorities; and
- Ingvar Karlberg, MD, Professor of Social Medicine, Gothenburg University.

### Scientific committee

To oversee the development of the scientific content and themes of the conference programme, including the identification of keynote speakers and the invitation and selection of abstracts and papers, a scientific committee was established a year in advance of the conference. This comprised:

- Britt-Marie Brinkmo—Director, County Council of Halland;
- Nick Goodwin, PhD—Chair, International Network of Integrated Care and Senior Fellow, King's Fund, London;
- Ingvar Karlberg, MD, Professor of Social Medicine, Gothenburg University
- Dennis L. Kodner, PhD, Director and Professor of Medicine and Gerontology, NYIT Center for Gerontology and Geriatrics, New York College of Osteo-

pathic Medicine of New York Institute of Technology (NYIT); and

- Jennifer Smith, Business Manager, International Network of Integrated Care.

Reflecting on the themes of the conference, the scientific committee invited a number of esteemed local and international speakers to provide keynote plenary presentations and facilitate a symposium session. The scientific committee also invited open submissions by abstracts for both oral and poster presentations related to the issues and themes of the conference. The submission deadline was 9<sup>th</sup> November 2007 and three types of paper were encouraged:

1. *Research*: These presentations would provide the results, completed or in-progress, of original research projects. The material should not have been published elsewhere, except in preliminary form, and it should be ready for publication as a journal article. Papers related to PhD projects, either completed or in progress, were especially encouraged.
2. *Policy*: These papers could describe any development in policy (whether governmental, organisational, or any other) that affected the integration of care associated with the themes of the conference. Policy papers that made international comparisons were especially welcomed.
3. *Practice*: These papers included projects and developments focusing on practice-oriented questions and reporting on recent experiences and innovations in integrated care. These papers required the presentation of case descriptions of integrated care on the national, regional or local level.

Those submitting abstracts could elect to present either a main conference paper or a poster paper. Abstracts needed to be structured according to a set format, be approximately 200 words in length, and accompanied by the author's preference for the type of presentation. Two members of the scientific committee reviewed and rated each abstract using a standard proforma. Selection of abstracts for oral and poster presentations, as well as rejections, were then agreed by the committee. Overall, 30 abstracts were accepted for oral presentations, 7 abstracts for poster presentations whilst 2 oral submission abstracts were asked to present as posters and 11 abstracts were rejected. Of those invited to present oral papers, 3 subsequently declined the invitation with 4 declining to present their poster paper. [Table 2](#) shows the breakdown of the numbers and types of abstracts submitted and selected.

The programme for the conference [1] split accepted oral presentations of similar topics across six emerg-

**Table 2.** Numbers and types of abstracts submitted and selected.

Abstract type	Submitted	Accepted	Oral accepted as poster	Rejected
Oral papers				
<i>Research</i>	24	17 (3 declined)	1	6
<i>Policy</i>	14	9 (1 declined)	1	4
<i>Practice</i>	5	5		
Poster papers				
<i>Research</i>	4	4 (2 declined)		
<i>Policy</i>	2	1 (1 declined)		1
<i>Practice</i>	1	1		

ing themes to be presented in parallel sessions during the conference. Three of the abstracts accepted for oral presentation were brought together to be presented and debated within the plenary symposium session on ways to measure the implementation and effectiveness of integrated care for people with chronic illness.

Revised abstracts and power-point presentations were collated after the conference to be included on the website of INIC [1] and to form the basis for the electronic publication of conference proceedings in this supplement. Selected oral paper contributors were also invited to submit scientific papers for peer-reviewed online publication in IJIC.

## Study tour

In developing annual conferences in different countries, a highlight is often the pre-conference study tour of local health and social care systems where various forms of integrated care are being practically implemented. On this occasion, the local organising committee arranged a pre-conference study tour that took delegates to examine innovations in integrated care in Lidköping and Kungälv-communities in Region Västra Götaland and relatively close to the conference centre in Gothenburg.

The first part of the visit was to the city of Lidköping located on the southern shore of Lake Vänern. In the Town Hall, Tommy Johansson—Head of Primary Health Care—related the experiences of a health and social care co-operative project in Västra Skaraborg (an area crossing six municipalities—Lidköping, Skara, Vara, Götene, Gråstorp and Essunga). The project—called *Future Health-Care in the Area of Lidköping*, was established in January 2001 as a jointly organised project whose goal was to integrate the medical rehabilitation of older people to meet individuals' needs. The business idea was that good and secure care could be provided where co-operation

between primary health care, in-ward care and municipality care was enabled.

Dr Johansson related how more than 50 staff from different professional and institutional backgrounds have since been working together in networks to provide services such as day care medical rehabilitation; geriatric day care; and occupational therapeutic and physiotherapeutic work in people's own homes. Project groups have also been established to collectively examine issues of terminal caring, psychiatry and more recently the management of long-term illnesses such as dementia, diabetes and heart failure. By developing clear objectives, a common documentation system, system competence measures, and flexible working practices between professionals it was shown that more integrated and individualised professional and technical support could be provided to people in need of rehabilitation services.

In discussion, some delegates wanted to know whether the initiative in Västra Skaraborg had been able to demonstrate a 'return on investment' from the process (i.e. to demonstrate an impact on policy or provision of patient care). It was related that this was currently under investigation in an evaluation by the Skaraborg Institute, but it was clear from the discussions that the participants were not necessarily demanding of 'outcomes' as a justification for their involvement since the process and belief in discussing integrated care was considered in and of itself worthwhile.

After a pleasant walking tour of Lidköping and equally pleasant lunch, the study tour returned southwards by bus to Kungälv, a community of 115,000 inhabitants. At Kungälv Hospital, study tour delegates learned about experiences of a local health and social care co-operative initiative called SIMBA (Samverkan I Mellersta Bohuslän och Ale). The SIMBA initiative had been operational since 1995 covering 4 municipalities north of Gothenburg (Kungälv, Stenungsund, Tjörn and Ale) and primarily comprised a process of cross-institutional learning on systemic problems in the experi-

ences of patients accessing health and social care arising from open discussions of ‘everyday’ and ‘adverse’ events. The principle method for relating issues and problems in care was ‘story-telling’ of the ‘full experience’ of patients (or staff) with care delivery. The SIMBA methodology then enabled time for reflective discussion, the identification of any problem patterns, and ideas about new ways forward.

SIMBA is led by a Board of senior representatives from the local hospital, primary health care and social services and through them is provided a regular forum and open environment in which politicians, directors, managers and staff from different provider agencies are able to exchange information, think and plan services together, and potentially establish new forms of co-operation to improve patient care experiences. One of the key systemic issues that stimulated the creation of SIMBA originally were unnecessarily long lengths of stay of older people in Kungälv Hospital leading to ‘bed blocking’ and the inability to bring and maintain older people in their own home or home environment. Investment in step-down facilities, the development of advanced home-care support, and better communication between care agencies were regarded as factors in subsequently reducing lengths of stay with SIMBA being argued to have been, and continuing to be, a very useful forum for such discussions and an influential factor in their development.

Lessons from the visit aired by delegates included the way the initiative focused on the entire needs of the patient from a ‘whole-systems’ perspective and how it was facilitated by a culture of learning and open debate. In reflecting on SIMBA, some delegates wondered whether accounts from the patient perspective could be more directly included in the future (there were no plans for this).

The study tour highlighted many aspects of integrated care in Sweden that were of interest to delegates, but discussions highlighted on one central aspect. In both case sites visited, there was apparent a healthy open culture for discussion and debate about the nature of care delivery with processes developed to specifically enable narratives between care staff and managers in ways that did not appear to undermine any professional territories. The extent to which such group discussions were actually effective mechanisms in enabling systemic changes—or concern with any evidence for this—was less clear. Indeed, whilst we learnt that the culture of open debate and discussion was important for participants to become engaged in debates on (and belief in) integrated care there was relatively little requirement or concentration on ‘systematising’ this in terms of new partnership or governance arrangements.

## Conference proceedings

The conference proper was opened by Nick Goodwin, Chair of INIC, and a welcome address was provided by Johan Assarsson, the Chief Executive of Region Västra Götaland, the conference hosts and regional authority responsible for health services on Sweden’s west coast. This was followed by three plenary speakers: Lars Edgren (Sweden); David Levine (Canada); and Cor Spreeuwenberg (Netherlands).

Lars Edgren, from the Nordic School of Public Health in Gothenburg, argued the case that greater specialisation in care delivery in Europe had led to a situation of fragmented care and where the responsibility for managing the transitions between care providers had, unreasonably, fallen on the shoulders of the patients themselves [2]. Professor Edgren argued that it was the responsibility of the system to create a continuing relationship with the patient/user regardless of who was, at any given moment, the responsible provider. To achieve this, Edgren argued for the development of a *complex adaptive system* [3], a term derived from complexity science to describe a system that is *self-organising*—such as ant-hill or the human immune system. By citing Augustinsson [4] and Nilsson [5], Edgren argued this could be achieved if the ability and culture to self-organise—to create order out of many local interactions—was embedded routinely in the complex web or relationships between agents within and outside the system rather than imposed (with failure) by an ‘external constructor’ governing system design but outside the delivery system *per se*. Indeed, Edgren argued that change could rarely be adequately forced from above but needed the complementary knowledge of local actors to share common tasks; develop collaborative behaviour; respect different capabilities and roles; and enable mutually acceptable solutions [2]. In conclusion, Edgren challenged the conference participants to move away from a ‘machine mindset’ and to embrace a more organic view based on enabling inter-dependencies to crowd-in appropriate behaviour free from central control.

Professor Edgren’s examination of the *complex adaptive system* and its value in enabling integrated care was the subject of much discussion, most of which argued that—whilst a system which self-regulates is inherently attractive—central leadership and vision was also required to ensure effective stewardship (i.e. to safeguard patient rights or societal values); to broker conflicts between participating agents; to ensure inertia is avoided; and to enable missing ingredients that feed the system to be found and injected.

All these top-down elements of leadership and drive to achieve a new ‘integrated care system’ were clearly

articulated in the second plenary session where David Levine—President and Chief Executive Officer of Montreal Regional Health Board, Canada—described Quebec's emerging model of health and social care and the political leadership and governance systems that have underpinned system redesign towards an integrated health care model. Levine's practical paper described how hospitals, local community service centers and long-term care centres had been merged into single institutions—Health and Social Care Centres (HSCCs). In stark contrast to Edgren's bottom-up vision for change, the mandated nature of HSCCs had created an integrated model of care to bring together the management of a range of previously separate services with the expected added benefits of enabling joint monitoring and evaluation of health and wellbeing in local communities and supporting the creation of local networks of care. The reforms, ongoing, have been underpinned by a strategic vision emphasising design principles embedded in models of chronic disease management and care for the frail elderly such as multi-disciplinary primary care teams and emphasis on patient empowerment and self-care [6]. The reform processes began with a system-wide set of changes to reorganise care on a population-basis, were followed-up with service integration aimed at providing more efficient care delivery, and the last step has been to focus on health and wellbeing by providing specific mandates to HSCCs across Quebec. Levine concluded that the success of these reforms now depended on physicians and other healthcare providers to make the cultural shift towards shared care, and the need for strong leaders to promote the vision and guide implementation.

The third and final keynote presentation in the first conference session was provided by Cor Spreeuwenberg, Professor of Integrated Chronic Care, Maastricht University, The Netherlands. This presentation examined the chronic care model [7] as a vehicle for the development of disease management in Europe. Echoing Edgren, Spreeuwenberg argued that whilst supporting medical practitioners to improve their skills had proven capabilities in improving care quality, there was a lack of evidence for their role in influencing lifestyle behaviours and/or supporting self-care. However, it was argued that professionals were not skilled in applying behavioural interventions—a factor undermining the basis of the chronic care model where productive patient-professional interactions, leading to informed self-care, is argued to be important. Spreeuwenberg concluded that care delivery to chronic patients must be based on managing the complexity of health problems and improving the readiness of patients to self-manage their conditions.

A common element to the three opening keynote presentations was the need for current health care delivery systems to adapt quickly to the requirements of the emerging needs of populations to manage the burden of long-term chronic illness. Edgren argued the need to encourage systems with characteristics that better enable local actors the mandate to adapt organically to local needs; Levine showed that importance of vision, leadership and political commitment to change; whilst Spreeuwenberg highlighted the potential importance of investing in supported self-management and behavioural change strategies. In our view, depending on local contexts for care delivery, each of these represent core components in the better integration of care for people with chronic illness.

After lunch on the first day of the conference, in which delegates could peruse the range of poster presentations, the afternoon began with three parallel sessions of four speakers each. Session 1—'integrated care systems'—continued the debate begun by Levine in discussing how integrated care policies at a systemic level could be prioritised, planned and put into practice. Session 2—'integrated care concepts'—examined in more detail some of our understanding of integrated care and potential models or tools for the concept's application. This session, in particular, raised a common issue observed during the conference over the use of different meanings and definitions of 'integrated care' and its various synonyms. An update of Kodner and Spreeuwenberg's [8] conceptual paper that revisits the concept and maps out the landscape of integrated care is now probably overdue, not least because, during Session 3 on 'developing and using evidence to support integrated care', putting boundaries around the mechanisms of integrated care approaches was seen as important in the ability to measure and assess performance. Session 3 showed that it was often easier to develop evidence for a specific disease-based intervention (for example, stroke, chronic obstructive pulmonary disease, myocardial infarct) than for other models of integration where causality between intervention and outcome was less certain.

The ability to measure the implementation and effectiveness of integrated care for people with chronic illness was further examined in the final plenary session of the day where Bert Vrijhoef—Director of Research, Department of Integrated Care, University Hospital Maastricht, Netherlands—led the debate with panelists from Germany (Kumpers), Austria (Stein) and France (Trouve). Vrijhoef revealed that there was no universally accepted or scientifically sound evaluation methodology or reporting framework through which to provide evidence-based recommendations to policy-

makers, professionals and researchers. Indeed, whilst each of the subsequent presentations examined evaluation principles and methodologies for measuring impact, it was clear that measurement of the impact of integrated care—and its economics—remained a significant challenge. It was agreed that this subject should be the subject of future INIC-led conferences.

At the conclusions of the first day of the conference delegates were able to relax and network over dinner, music and dancing. Ingvar Karlberg and Guus Schrijvers—founding members of a committee that led to the foundation of the *International Journal of Integrated Care*—gave speeches.

Day 2 of the conference started at 08.30 and returned to the parallel session format. Session 4—‘integrating medical social and home-based care’—offered primarily practical papers of very interesting cases in which care integration—whether holistically for an older person, or specifically to address a particular disease—could be safely undertaken within the home environment through multi-professional support. Emphasis in this session was given to the importance of multi-disciplinary assessment, individualised care plans, and case management. Session 5—‘leadership and management at the integrated care interface’—revealed how it is the role of leadership and managers to be both ‘landscape designers’ as well as ‘gardeners’ in enabling partnerships across inter-agency settings, revealing how these roles need to adapt over the life-cycle of partnerships for them to be sustainable [9]. Session 6—‘promoting integrated care in the home environment’—mixed practical, research and theoretical papers under a common theme of identifying how the care for ‘at-risk’ patients could be better co-ordinated in the transition from institutional to home-environment settings as well as better managed in the community to avoid institutionalisation in the first place.

After coffee and a final chance to examine poster papers, the conference concluded with two final keynote presentations from Mikael Sandlund and Ellen Nolte and a summation of emerging lessons from the conference by Dennis L. Kodner Sandlund—Associate Professor, Department of Clinical Science, Division of Psychiatry, Umeå University, Sweden—presented a paper examining the development of care integration in Sweden between psychiatry and social services. In this presentation, Sandlund described how the needs of a person with a psychiatric disability required housing support, employment, daily activities, social networks as well as medical care. Though somewhat sceptical of ‘integrated care’ as a concept, Sandlund argued the case for the need for comprehensive, continuous and flexible service responses involving

patients and their families—all principles we might argue are enshrined in a chronic care model. Sandlund showed, however, that for many of these ‘ingredients’ evidence for their effectiveness was lacking and that more research was required if the integrated care agenda was to convince.

Ellen Nolte—Senior Lecturer, London School of Hygiene and Tropical Medicine, UK—provided a presentation based on a major European Observatory study comparing approaches to chronic illness management in 6 European countries plus Canada and Australia [10]. Nolte reported that the aim of the research was to compile an in-depth assessment of how different countries were responding to the growing chronic disease burden in terms of several dimensions including: the type and format of chronic illness management; legal, financial and political frameworks; opportunities and challenges for workforce development; potential capacity restrictions within systems (e.g. information technology, management skills); the drivers for change; and potential key barriers and facilitators towards enhancing services. By focusing on different country cases, Nolte showed how approaches varied greatly, though chronic illness management invariably was medicalised and disease-focused in nature rather than holistic and multi-professional. For example, countries exhibited varying strengths in the roles in chronic illness care of non-medical staff, such as nurses, or in promoting self-care and providing self-management support to patients themselves. Nolte noted that one of the major challenges was getting physicians ‘on board’ to move from a care treatment to a care management paradigm, and the lack of evidence-based justification for different forms of co-ordination. Nolte concluded that there was no universal model or way of doing things, though countries with choice-based and fee-for-service methods of payment in primary care were potentially at a contextual disadvantage in achieving system-wide and integrated strategies.

## Concluding remarks

The conference concluded with closing remarks from Dennis L. Kodner, Professor of Medicine and Gerontology at New York College of Osteopathic Medicine of New York Institute of Technology (NYIT) and Director, NYIT Center for Gerontology and Geriatrics in New York, USA. After making some brief comments on each of the keynote presentations delivered during the 2-day programme, Professor Kodner gave his views on where the emerging field of integrated care stands and also needs to travel. According to Kodner, integrated care is still evolving as a relatively new trans-disciplinary area of inquiry and action and, as such, is

in its infancy. First, he underscored that much more work must be done to conceptually clarify the meaning, landscape, and language of integrated care. Without these sound intellectual and theoretical underpinnings, it will become increasingly difficult in the future to advance integrated care policies and strategies on the policy and practice levels. Second, Kodner asserted that the evaluation of integrated care models and methods in organizational and efficiency terms is not enough. He argued that this new 'technology of care' must also be carefully examined and understood in terms of the presumed relationships between interventions (i.e. cause) and outcomes (i.e. effect), especially with respect to personal health impacts. And, finally, Kodner made a plea to focus greater attention on what and how patients/clients think about integrated care programmes. He maintained that this is an important key to the approach's

ultimate acceptance by consumers. Hopefully, by the next INIC conference, we will begin to see positive signs of movement in these directions.

## Acknowledgments

The authors would like to thank our conference hosts, Västra Götaland, and the other organisational conference committee members of Ingvar Karlberg and Britt-Marie Brinkmo for their time and commitment in helping to make this 8<sup>th</sup> Annual Conference a success. We would also like to thank all the speakers, chairpersons and delegates for making the event so vibrant and interesting.

Information on the details of conference speeches and study tour visits in this article of proceedings represent entirely the views and understanding of the authors and may not represent the views of the speakers themselves. The authors apologise for any misrepresentation of facts and/or mistakes in interpretation that may be presented.

## References

1. Conference programme/presentation slides of the 8th Annual Integrated Care Conference; 2008 March 6–7; Gothenburg, Sweden. Available from: <http://www.integratedcarenetwork.org/Sweden2008/conf2008.php?opt=2>.
2. Edgren L, Stenberg G. Närsjukvårdens ansikten. [The different faces of primary care]. Lund: Studentlitteratur; 2006.
3. Bar-Yam Y. Dynamics of complexity systems. Reading: Perseus Books; 1997.
4. Augustinsson S. Om organiserad komplexitet: integration av organisering, lärande och kunnande. [Organised complexity: integration of organisation, learning and knowing]. [Doctoral thesis]. Luleå: Luleå University of Technology, Department of Human Work Sciences; 2006.
5. Nilsson F. Adaptive Logistics – using complexity theory to facilitate increased effectiveness in logistics. Lund: Department of Design Sciences, Division of Packaging Logistics, Lund University; 2005.
6. Levine D. The Reform of Health and Social Services in Quebec. *HealthcarePapers* 2007;8(Special Issue):46–54. Available from: <http://www.longwoods.com/product.php?productid=19219&cat=508>.
7. Wagner E. Chronic disease management: what will it take to improve care for chronic illness? *Effective Clinical Practice* 1998 Aug–Sep;1(1):2–4.
8. Kodner D, Spreeuwenberg C. Integrated care: meaning, logic, applications, and implications – a discussion paper. *International Journal of Integrated Care* [serial online] 2002 Nov 14;2. Available from: <http://www.ijic.org>.
9. Peck E, Dickinson H. Managing and leading in inter-agency settings. The Policy Press: Bristol; 2008.
10. European Observatory on Health Systems and Policies. Responding to the epidemic of chronic disease (study proposal). Available from: [http://www.euro.who.int/observatory/Studies/20061109\\_2](http://www.euro.who.int/observatory/Studies/20061109_2).