Commentary

The Dialogue on Diabetes and Depression (DDD): Origins and achievements

Norman Sartorius, Larry Cimino

1. Introduction

The Dialogue on Diabetes and Depression (DDD) is an international collaborative initiative focusing on the comorbidity of depression and diabetes. It is the largest effort of its type ever undertaken, bringing together 18 major nongovernmental organizations as well as several major institutes and scientific branches of pharmaceutical companies. Table 1 shows the members of the DDD at the end of 2011. The Association for the Improvement of Mental Health Programmes (AMH), a not-for-profit organization sited in Geneva in Switzerland, is coordinating the activities of the DDD.

The DDD initiative aims to raise awareness about the magnitude and severity of problems related to the comorbidity of depression and diabetes and to improve its recognition and management in health services. The choice of the comorbidity of depression and diabetes as a focus for action among the multitude of possible pairs of mental and physical diseases was pragmatic. The prevalence of both diseases is high and increasing rapidly. They are perhaps less stigmatized than many other long lasting mental and physical illnesses. They occur together frequently and their simultaneous presence worsens the prognosis of both depression and diabetes. The recognition of comorbid depression and diabetes in health care systems seems to be poor. The reviews of comorbidity of mental and physical diseases carried out by AMH (Katon et al., 2007, 2010; Leucht et al., 2010; Glassman et al., 2010; Gordon, 2010; O'Hara et al., 2010; Kissane et al., 2011; Kurrel et al., in press) did not identify any other pair of mental and physical disorders that would provide a better target for an initiative whose aim is to demonstrate how much can be done for persons suffering simultaneously from both mental and a physical illness by improving recognition and treatment of both diseases.

It is hoped that the DDD programme will open the door to similar initiatives addressing the comorbidity of other mental and physical disorders. The development of such programmes is urgent. The successes of medicine have led to an extension of life expectancy of people who suffer from chronic illnesses and disability, which increases the risk of comorbidity. Longer life expectancy also adds additional years of risk for comorbidity. Some treatments for chronic mental and chronic physical disorders have side effects that may lead to comorbidity. Other factors that increase the likelihood of comorbidity are also becoming more common, including, for example, the abuse of alcohol and drugs and unhealthy life styles.

The increased prevalence of comorbidity is unfortunately occurring at a time when medicine is going through a process of fragmentation into ever more focused disciplines. Public health authorities in many countries have promoted the development and strengthening of primary health care services but this has not prevented an ever-greater number of people from bypassing the general practitioner and seeking help directly from specialists. The increasing health literacy of populations worldwide (which diminishes the authority of the primary healthcare worker) also contributes to the tendency of self-diagnosis and self-referral to specialists based on knowledge gleaned from the Internet or learned from other modern information systems. Specialized services are, on the whole, reluctant to do much about a comorbid disease that is outside their area of expertise, even when they recognize its presence. The competence of general health care workers and specialists other than psychiatrists to deal with psychiatric problems is on the whole limited, while the same is true for psychiatrists who

Table 1
Participating professional organizations.

- American Association of Clinical Endocrinologists
- American Diabetes Association
- Association of European Psychiatrists
- Asociacion Latinoamericana de Diabetes (ALAD)
- Collegium Internationale Neuro-Psychopharmacologicum (CINP)
- Diabetes UK
- European Association for the Study of Diabetes/Psychosocial Aspects of Diabetes
- Global Alliance of Mental Illness Advocacy Network (GAMIAN) - Europe
- International Council of Nurses
- International Diabetes Federation
- International Federation of Pharmaceutical Manufacturers and Associations (IFPMA)
- International Society for Affective Disorders
- International Society of Behavioral Medicine
- Project Hope
- World Association of Social Psychiatry
- World Federation for Mental Health
- World Organization of Family Doctors (Wonca)
- World Psychiatric Association

* Addresses for correspondence: Professor Norman Sartorius, President, Association for the Improvement of Mental Health Programmes (AMH), 14 chemin Colladon, 1209 Geneva, Switzerland. Tel.: +41 22 788 2331; fax: +41 22 788 2334:
Larry C. Cimino, President, ProConsult, LLC, 3693 Power Place, Carmel, Indiana 46033, USA. Tel.: +1 (317) 846-5760; Cell: +1 (317) 946-2268.
rarely stay abreast with knowledge and skills of other branches of medicine.

In order to raise awareness about the comorbidity of depression and diabetes and to improve its recognition and management in health services, the Dialogue on Diabetes and Depression has taken four lines of action. It produces reviews of knowledge about issues relevant to the recognition, understanding and treatment of comorbid depression and diabetes; it organizes symposia, lectures and keynote addresses at scientific meetings to increase the awareness of the magnitude and severity of problems caused by comorbidity; it produces training materials and models of education about comorbid diabetes and depression; and it stimulates and facilitates research relevant to its two aims stated above.

2. Review and presentation of knowledge about comorbidity of diabetes and depression, about its causes, its consequences and its management

To address this task the DDD has established a number of working groups with experts from different countries and disciplines including diabetologists, endocrinologists, psychiatrists, general practitioners and behavioural scientists, whose role is to produce reviews of knowledge on issues selected by the groups and considered as being particularly relevant to the DDD. The list of working groups and their leaders is shown on Table 2.

The groups have produced academic papers (some of which appear in this supplement) and contributed chapters to a book on depression and diabetes (Katon et al., 2010). These have dealt with the epidemiology, pathogenesis, medical cost and treatment of comorbid depression and diabetes as well as with the public health and cultural issues arising in this connection. A review of the literature on the treatment of depression in people with diabetes has also been published (van der Feltz-Cornelis et al., 2010). Other reviews have been presented at scientific meetings (see below) and it is expected that they will be published in scientific journals.

3. Raising awareness about the magnitude and severity of consequences of comorbidity of depression and diabetes

The DDD has directed its awareness-raising efforts in several directions. Its first target was the scientific and professional community: in its first two years, the DDD has organized symposia dealing with various aspects of comorbidity of depression and diabetes at all the major world congresses of the most directly concerned professionals – the general practitioners, the psychiatrists and the diabetologists. It followed this up by symposia and plenary lectures at numerous regional and national meetings organized by these groups of professions. Table 3 lists the meetings at which DDD organized symposia and/or plenary lectures given by its members.

In all of the symposia there were presentations about the prevalence and consequences of comorbidity of diabetes and depression as well as summaries of knowledge about the pathogenesis of these disorders and their management in practice. In addition to these symposia and presentations, DDD also organized short-lasting courses and workshops in the framework of the congresses. The slides and abstracts of all the scientific presentations have been made available to the professional community.

With the help of the DDD, the World Federation for Mental Health (WFMH), which is one of the associations participating in the DDD initiative, produced a set of informational materials in several languages about depression and diabetes that can be used in presenting the problem to public health authorities and to the general public. These materials may be found on the WFMH website: http://www.wfmh.org/. It is planned to update this material at regular intervals and to add to it other awareness-raising materials that are being produced by the DDD Communications working group.

4. Education and training about comorbidity of diabetes and depression

DDD is developing four types of educational materials and models of training about comorbidity. The first of these was focused on the education of teachers of nurses who carry a major part of health services in Africa. The materials for this training were produced by a small group of experts who then used the materials in a programme organized jointly with the International Council of Nursing, one of the participating associations in the DDD, in five African countries.

Table 2

<table>
<thead>
<tr>
<th>Working Group</th>
<th>Chairperson(s)</th>
<th>Affiliation</th>
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</thead>
<tbody>
<tr>
<td>Conceptual issues</td>
<td>Juliana Chan</td>
<td>Chinese University of Hong Kong</td>
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<tr>
<td></td>
<td>Edwin Fisher</td>
<td>University of North Carolina, USA</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>Cathy Lloyd</td>
<td>The Open University, UK</td>
</tr>
<tr>
<td></td>
<td>Norbert Hermanns</td>
<td>Research Institute of Diabetes, Germany</td>
</tr>
<tr>
<td>Health care delivery</td>
<td>Linda Gask</td>
<td>University of Manchester, UK</td>
</tr>
<tr>
<td></td>
<td>Richard Roberts</td>
<td>University of Wisconsin, USA</td>
</tr>
<tr>
<td>Health economics</td>
<td>Juan Jose Gagliardi</td>
<td>National University of La Plata, Argentina</td>
</tr>
<tr>
<td></td>
<td>David McDaid</td>
<td>London School of Economics, UK</td>
</tr>
<tr>
<td>Pathogenesis of co-morbidity</td>
<td>Alan Jacobson</td>
<td>Winthrop-University Hospital, USA</td>
</tr>
<tr>
<td></td>
<td>In Kyon Lyoo</td>
<td>Seoul National University, Korea</td>
</tr>
<tr>
<td>Public health intervention</td>
<td>Brian Oldenburg</td>
<td>Monash University, Australia</td>
</tr>
<tr>
<td>Treatment group #1</td>
<td>Christina van der Feltz-Cornelis</td>
<td>Trimbos Institute, The Netherlands</td>
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<tr>
<td>Treatment group #2</td>
<td>Richard Hellman</td>
<td>American Association of Clinical Endocrinology, USA</td>
</tr>
<tr>
<td></td>
<td>John Oldham</td>
<td>American Psychiatric Association, USA</td>
</tr>
<tr>
<td>Communications</td>
<td>Hugh Schultze</td>
<td>c/Change, USA</td>
</tr>
<tr>
<td></td>
<td>Michele Owens-Gary</td>
<td>USA Centers for Disease Control</td>
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*Several individuals are also affiliated with the participating organizations.
Table 3
List of scientific and professional meetings during which DDD organized symposia and/or plenary presentations.

**Global events**
- World Federation for Mental Health World Congress; (Athens, Greece; 2009)
- International Council of Nurses 24th Quadrennial Congress (Dublin, South Africa; 2009)
- World Association of Family Doctors (Wonca) World Congress (Cancun, Mexico; 2010)
- World Association of Social Psychiatry World Congress (Marrakech, Morocco; 2010)
- Conference on the Promotion of Mental Health and Prevention of Mental and Behavioral Disorders (Washington, DC, USA; 2010)
- International Council of Nurses International Congress (Malta; 2011)
- Royal College of Psychiatrists International Congress (Brighton, UK; 2011)
- World Psychiatric Association 15th World Congress of Psychiatry (Buenos Aires, Argentina; 2011)
- World Federation for Mental Health World Congress (Cape Town, South Africa; 2011)
- International Diabetes Federation World Diabetes Congress (Dubai, UAE; 2011)
- World Psychiatric Association/World Organization of Family Doctors (Wonca) Thematic Conference on Mental Health and Primary Health Care (Granada, Spain; 2012)
- World Psychiatric Association International Congress (Prague, Czech Republic; 2012)

**Regional events**
- World Psychiatric Association Sub-Saharan Regional Conference (Abuja, Nigeria; 2009)
- Global Alliance of Mental Illness Advocacy Network (GAMIAN–Europe) Annual Convention (Malta; 2009)
- EU Thematic Conference on Prevention of Suicide in the Time of Crisis (Budapest, Hungary; 2009)
- International Diabetes Federation Regional Congress in Western Pacific (Busan, Korea; 2010)
- World Psychiatric Association Regional Meeting (Beijing, China; 2010)
- European Psychiatric Association Annual Congress (Munich, Germany; 2010)
- Latin American Diabetes Association Annual Congress; (Santiago, Chile; 2010)
- World Association of Family Doctors (Wonca) European Regional Conference (Malaga, Spain; 2010)
- Federation of European Nurses in Diabetes Conference (Stockholm, Sweden; 2010)
- World Psychiatric Association Eastern Mediterranean Regional Meeting (Cairo, Egypt; 2011)
- European Association for the Study of Diabetes Congress (Lisbon, Portugal; 2011)
- Latin American Psychiatric Association Annual Congress (Santa Marta, Colombia; 2011)
- Association of European Psychiatrists Annual Congress (Prague, Czech Republic; 2012)
- Latin American Diabetes Association (ALAD) Regional Forum on Diabetes and Depression (Buenos Aires, Argentina; 2012)
- European Congress of Social Psychiatry (Geneva, Switzerland; 2012)

**National events**
- Chinese Endocrine Society Annual Meeting (Nanjing, China; 2009)
- Open University Conference (Milton Keynes, UK; 2009)
- Diabetes UK Annual Professional Conference (London, UK; 2011)
- Kolkata Diabetes and Endocrinology Forum (Calcutta, India; 2011)
- Research Society for the Study of Diabetes in India (RSSDI) Annual Meeting (Mumbai, India; 2011)
- Argentine Diabetes Association Conference (Cordoba, Argentina; 2012)
- Argentine Diabetes Association Conference (Usuahia, Argentina; 2012)

The other target groups for the educational stream of the DDD are psychiatrists, endocrinologists, general practitioners and public health officers. The production of the materials for the training of these groups will continue to be developed in collaboration with the relevant international organizations that participate in the DDD.

5. Stimulation and facilitation of research on comorbidity of depression and diabetes

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and the National Institute of Mental Health (NIMH) of the USA in collaboration with the DDD brought together leading scientists from a variety of countries to a conference in October 2012 to examine the currently existing knowledge about comorbidity of diabetes and depression and to identify gaps of knowledge that need to be addressed by appropriate research. The working groups of DDD have also been engaged in similar efforts and it is expected that these and the conference will produce a roadmap for further research at national and international level.

DDD has also focused on the development of an international study that would examine the frequency and type of depression among patients with diabetes who are attending leading diabetes centers in a number of countries. It is expected that in addition to Argentina, Brazil, China, India, Germany, Italy, Poland, Russia, Serbia and the UK, which have already expressed a firm interest in this study, other countries will join this investigation. The questions that the study should answer are of considerable public health importance:

- Are there patients who are currently under treatment for diabetes and suffer from depression that is neither recognized nor treated?
- Are serious complications of diabetes in persons who suffer from diabetes and a comorbid depression more frequent than in persons who do not have depression?
- Does adequate treatment of comorbid depression diminish the frequency and severity of complications of diabetes?

Answers to some of these questions have been obtained in a few studies carried out in some of the industrialized countries, but in most of the countries involved in this study such investigations have never been done. In addition to the scientific interest in the results of this multinational collaborative research, it is expected that the study will strengthen the collaborative network of leading centres in many countries and that it will provide information that will facilitate the decisions about the development of health care for people with comorbid depression and diabetes.

6. Conclusion and outlook

The DDD initiative has entered into the fourth year of its existence. It has assembled major international professional and other nongovernmental associations and organizations. It has raised interest in the comorbidity of diabetes and depression and in comorbidity of mental and physical disorders in general. It has drawn the attention of many to practical and scientific problems related to comorbidity, which is doubtlessly one of the great challenges for medicine in the 21st century. It has produced training materials and publications and created networks of people and institutions interested in furthering knowledge about comorbidity and applying it in practice. Its success so far and its continuing work and achievements will depend on the continuing good will and interest in its work of agencies and numerous individuals who have joined it and generously supported its activities. Further information about the DDD can be obtained from the Chairperson of the DDD initiative, Professor N. Sartorius, MD, PhD, FRCPsych.
Conflict of interest

N. Sartorius participated in symposia and other scientific events sponsored by Astra Zeneca, Eli Lilly, Hoffmann-La Roche, Lundbeck and Pfizer companies and served as a consultant to Eli Lilly, Lundbeck and Servier companies.

L. Cimino provides services to the Association for the Improvement of Mental Health Programmes on a retainer basis. He serves on the Executive Committee of the Board of Directors of the World Federation for Mental Health and chairs the Board of Directors of the Indiana Center for Intercultural Communications.

Acknowledgments

The DDD initiative has been supported by many individuals and agencies. Eli Lilly and Company supported the central coordination of the activities of the initiative and the Lundbeck Institute provided funds that made the training programme for nurse teachers in Africa possible. Many experts and other individuals generously gave their time and advice to the programme and it is not possible to list them all here. The associations and organizations participating in the initiative put expertise and materials at the disposal of the initiative and facilitated DDD’s preparation of symposia and other scientific events during their congresses. All these contributions are gratefully acknowledged.

References


