



# The application of public health information technology in the monitoring of clients in treatment for a substance related disorder in Belgium

First results on double counting and preferential pathways of clients

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# 0. Abstract

## Objective

In 2011, a national, secured and computerized registration of all treatment episodes for a substance related disorder was implemented in Belgium. This epidemiological registration is part of a project of the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), called Treatment Demand Indicator (TDI). One of the important features of the Belgian registration is the use of the client's national identification number to accurately and securely identify their health records in this national database. The technical architecture of this registration, as well as advantages of the use of the unique identifier will be explained in terms of double counting, follow-up of clients over time and further developments of integrated systems.

## Method

A web-based platform, integrating the secured access, encryption and coding services of a Trusted Third Party was developed to facilitate all Belgian treatment facilities in the registration of 20 variables for each treatment episodes followed by clients in treatment for a substance related disorder. The coded national identification number was used to identify clients. If this national identification number is not available, other alternatives can be used. Records submitted to the Belgian TDI platform in 2011 and 2012 were analysed in terms of a) the utilisation rate of this unique number, b) the double counting avoidance and c) the follow-up of clients in time.

# 0. Abstract



## Results

In 2011, 97 treatment units participated in the Belgian TDI registration and registered 8143 treatment episodes.

The national identification number was used in 88.1% of these records in 2011. Discrepancies were found between types of treatment centres : 75.0% of use in low-threshold centres vs. 99.1% in residential crisis centres. Among all the records (2011 and 2012) using the national identification number, 8.8% were records of a client seen previously in another treatment unit. The identification of these records allows to avoid double counting of clients for the data reporting. Proportionally, clients in residential crisis centres are more often seen in other treatments facilities afterwards (28.3%) compared with patients from other residential centres (8.7%) a or ambulatory centres (4.8% and 3.5%). A more in depth analysis of these multiple records can also identify preferential pathways of clients in treatment.

## Conclusion

The application of public health information technology in the monitoring of clients in treatment for a substance related disorder increases substantially the accuracy of the epidemiological estimates but also enables the longitudinal and geographical follow up of the clients.

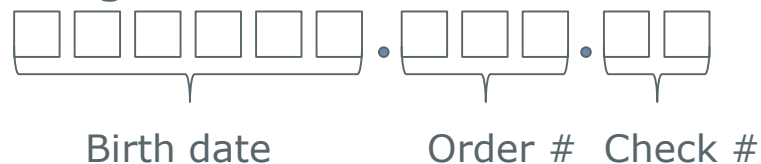
Future linkage databases including information on substitution treatment, infectious diseases, mortality or reimbursement can be accomplished with approval of privacy commission. This will put the TDI database in a central position for a better integrated, secured and available health information on clients with drug or alcohol problems.

# 1. Context

- The Treatment Demand Indicator (TDI) is a mandatory epidemiological key indicator asked by the EMCDDA
  - It concerns the annual registration of treatment episodes for a substance related disorder at national level
  - Characteristics of treatment for substance related disorders are
    - Large amount of dropouts (60-80% patients)
    - Long term treatment in different facilities
    - Repeated treatment episodes
- Can result in overestimation of number of treated persons

## 2. Method

- In 2011, a secured and computerized registration system was launched in Belgium to collect TDI data from all treatment facilities at national level
- Clients are registered via their national identification number :



- Available for every belgian citizen → Unique
- Verifiable number → Accurate
- Coded via a trusted third party → Secure and anonymous
- Alternatives if not available → Flexible

## 2. Method

A technical platform in collaboration with eHealth allows:

- A secured identification of users within treatment facilities
  - access via their electronic ID card, authorization management platform
- The registration of data :
  - via an electronic web form
  - via an export from an existing database
- The coding of the national identification number
  - immediate coding of the national number by our trusted third party
- The feedback of the registered data
  - export of raw data and reporting module

## 3. Results

Participation, treatment episodes and use of the unique id number in the registration year 2011

Type of treatment facility	# units	# records	% use of NIN
Ambulant Low-threshold	15	1638	75.0
Ambulant Day center	16	2904	91.1
Residential Crisis center	7	963	99.1
Residential Therapeutic comm.	12	796	78.6
Residential Hospital	47	1842	93.8
<b>TOTAL</b>	<b>97</b>	<b>8143</b>	<b>88.1</b>

# 3. Results

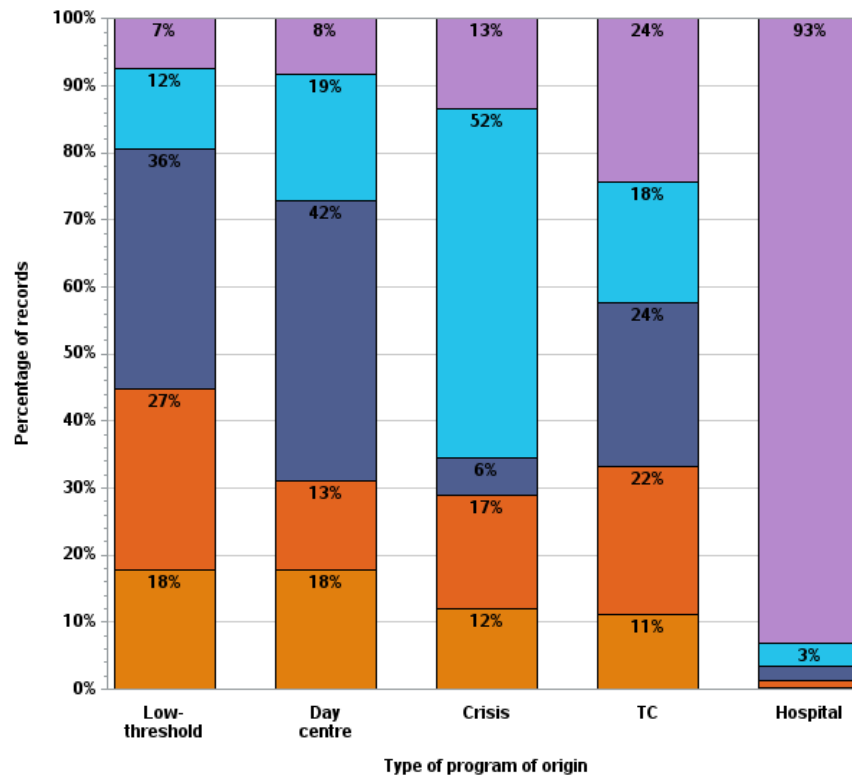
Transfers between treatment facilities in 2011 and 2012

Type of treatment facility	# records	# records at the origin of a client's transfer	%
Ambulant Low-threshold	1925	67	3.5
Ambulant Day center	3299	158	4.8
Residential Crisis center	1002	284	28.3
Residential Therapeutic comm.	1140	99	8.7
Residential Hospital	6746	631	9.4
<b>TOTAL</b>	<b>14112</b>	<b>1239</b>	<b>8.8</b>



# 3. Results

Preferential pathways from a program of origin to another



## 4. Conclusions

- Increase of the accuracy (double counting) and epidemiological estimates of the database (longitudinal and geographical follow-up of clients) by using the National Identification Number in the TDI registration
- Future linkage possible with other databases :
  - Substitution treatment
  - Infectious diseases
  - Mortality
  - Reimbursement by social security
  - ...