



# National Frameworks Romania

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## Background

### **Cristina Purtil**

- Global Product Manager for GE Healthcare and EMEA Marketing manager for Dell in the USA and Europe
- Experience in diabetes with Disetronic (Switzerland) insulin pumps and at Telemedica Consulting in blood glucose tests
- EU expert/ evaluator for Horizon 2020 SME Instrument, Fast Track to Innovation Pilot and R&D projects
- MBA from Georgia Institute of Technology in Atlanta, USA

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## Background (2)

- **Telemedica Consulting:** subcontractor in BIRO and EUBIROD projects, performing all tasks (i.e. technology transfer) for National Institute of Diabetes "N. Paulescu"
- Founded in 2004 by Dr. Simion Pruna, a Senior Research Scientist at the National Diabetes Institute "Prof. N. Paulescu" – clinical care for diabetic patients of all ages and with all type of diabetes (65,000 patients in Bucharest).

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## Background (3)

- **Telemedica Consulting** has a professional network with National Institute of Diabetes in Bucharest and with Diabetes Centres in Romania and in the Black Sea area



- Partner in IT for health research projects (supported by EU, WHO Europe and BSEC) for electronic clinical data collection aiming the measurement of the quality and outcomes of diabetes care

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## Description of the Activity

- Provided a sample of **3,079 real patients' data** to be included in various technology transfer activities during the BIRO technology development and tested the system functionality and usability
- Since 2012 produced six clinical studies based on BIRO technology aiming to provide a local and regional view of diabetes outcomes
- The results were used to enhance clinical decision-making

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## Objectives of the Activity

- To integrate the BIRO data set with EHR systems (diabetes registers) approved by the Romanian Ministry of Health
- To produce comparable diabetes care data across diabetes centres in Romania
- To facilitate data export for statistical analysis using BIRO technology.

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## Research component

- Process quality outcomes (individual level) e.g. lipids, HbA1c, BMI.
- Outcome quality – intermediate outcomes, e.g. HbA1c, BP.
- Terminal outcomes e.g. renal failure and dialysis.

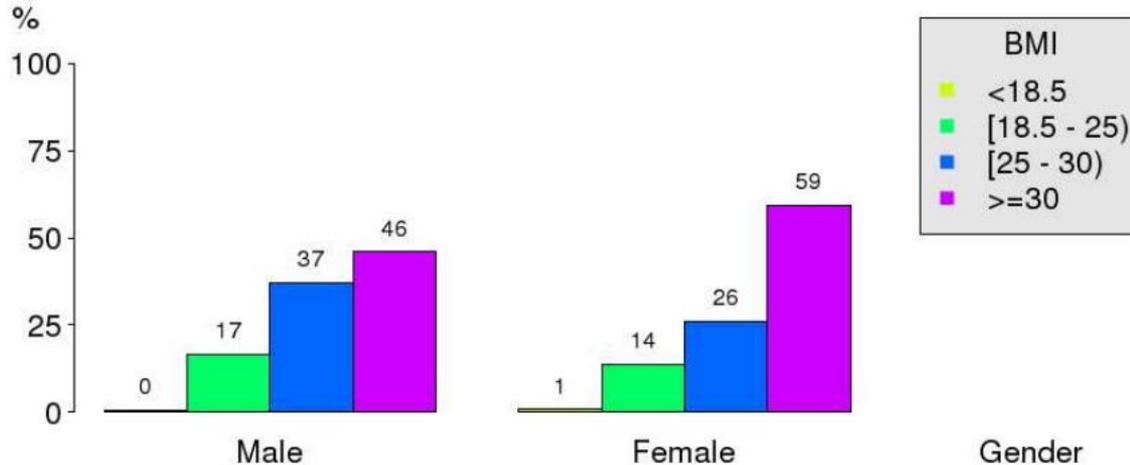


Fig. 2. BMI \* Gender (Type of Diabetes = Type 2).

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## Data systems

- **Data** have been collected on various parameters such as Type of diabetes, Sex, Date of birth, Date of Diagnosis, Episode date, BMI, etc. by using RODIAB (continuous live data), DRG (routine administrative), by exported from BSTD (DIABCARE) registry and Sincrodiab (Paulescu Institute's dataset) and in Excel (for clinical studies).
- **Geographical coverage:** Bucharest, and national: Timisoara, Cluj Napoca.
- **Privacy and data protection** strategies according the Ministry of Health policy

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## IT solutions

- **RODIAB** registry, the owner is Ministry of Health. The system was implemented in many diabetes centres in Romania (Bucharest, Cluj, Timisora, Craiova, Iasi, etc.).
- mHealth solution: **TELEDIAB** system for Diabetes Eyes live data records (Diabetes Web-based registry for Black Sea region, developed through a project coordinated by Telemedica Consulting and funded by BSEC)

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## Quality monitoring component

- BIRO software was used in National Institute of Diabetes, Diabetes Ambulatory Centre in Bucharest, Diabetes Centre in Timisoara
- Doctors found BIRO very useful for automatic and advanced data analysis
- The General managers of these institutions together with Telemedica published 3 studies as first authors
- The extensive use of the BIRO technology depends on the implementation of the system in reimbursement schemes (e.g. used for cost reduction and restructuring of services, evaluation of managers, etc)

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## BIRO system improvement requirements

- New parameters to be added to BIRO data set. Centre of Diabetes Cluj sent to Telemedica a database of **16,873 patients** with parameters specific for **Diabetes Foot care** recorded with DRG system. Data could not be analysed due to missing such parameters in BIRO dataset.
- Ambulatory Diabetes Centre in Bucharest initiated a **longitudinal** epidemiological study on **1,025 patients. Episode date was 1941, 1942 and 1943.** BIRO system has rejected the records for patients having DOB before 1900. However, to be able to use BIRO system for data analysis we have added 50 years for DOB, DOD and EpiDate.

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## Dissemination strategies

- The dissemination measures were based on:
  - Telemedica website
  - E-mail newsletter to 130 Romanian Diabetes Specialists Doctors in 41 Diabetes Centre
- Participation in scientific events
  - Romanian Diabetes Association Congress
  - Annual meeting of Romanian Medical Association held at the Romanian Academy
- Peer review papers: Six papers coordinated by Telemedica Consulting and performed by using BIRO technology:

<http://www.telemed.ro/index.php/eu-projects>

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## CONCLUSION

BIRO technology is an advanced data analysis software based on common datasets which can connect the healthcare centres at national level and the countries at EU level

# Thank you!