

type 2 diabetes. The 14-days adhesive sensor, that continuously measures glucose levels in the interstitial fluid, can transfer glucose levels data to a handheld reader or a smartphone equipped with a specific medical app. The uptake of the new technology has been limited so far, because of its high costs. A cost analysis has been conducted to identify the optimal target population of introducing FSM in Veneto.

METHODS:

The model was designed with a 1-year time horizon for patients with diabetes using intensive insulin in Veneto region. The costs of the new technology was estimated using inputs from the two main randomized controlled trials (the IMPACT study and the REPLACE study) published in the international literature, Regional evidence-based guidelines and administrative database. Resource utilization included strips, lancets, needles, sensors, distribution and patients training. Regional unit costs were adopted.

RESULTS:

FSM has not shown so far relevant and statically significant benefits in terms of severe adverse events' reduction. Estimated yearly costs for a FSM user included glucose monitoring, technology training and distribution costs, for a total of EUR1277 per patient. The new technology has been shown to be affordable in diabetic patients with i) 4years<age<18years, ii) continuous subcutaneous insulin infusion and iii) ≥ 5 blood glucose monitoring per day.

CONCLUSIONS:

The Veneto Region should carefully consider prescribing extension to other diabetic patients categories, since the high cost of the new technology. A strict prescribing monitoring is strongly recommended with the aim of ensuring appropriateness and avoiding overspending.

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VP189 Hemolysis Induced By Modern Infusion Pumps During Blood Transfusion

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INTRODUCTION:

Following a first field evaluation conducted in 2013, we found that hemolysis can be induced by infusion pumps during blood transfusion. Actually, limited data is available on the risk of hemolysis associated with the most used infusion pumps in Quebec hospitals: InfusomatSpace (peristaltic), Plum A+TM (piston) and ColleagueCXE (shuttle).

METHODS:

Staff from the blood bank and the Health Technology Assessment (HTA) unit in our hospital collaborated in 2016 to assess the hemolysis and potassium level (that is, a blood test sensitive to hemolysis) induced by the use of the three infusion pumps mentioned above. Measurements were taken for each pump at five flow rates, from 30 to 450 ml/hour, and were compared with measurements taken before using the pumps. Tests were conducted with 135 red blood cell (RBC) units. RBC units were aged from 10 to 28 days.

RESULTS:

The shuttle- and piston-type pumps resulted in low hemolysis levels. The peristaltic-type pump produced significantly more hemolysis. However, the absolute value of hemolysis remained within the range recommended by the regulatory agencies in North America and Europe. Potassium levels did not increase with the use of the pumps.

CONCLUSIONS:

The collaboration between the blood bank and the HTA unit led to the conclusion that modern infusion pumps

widely used in Quebec hospitals produce non-threatening levels of hemolysis during blood transfusion. This finding is important to ensure safe practices.

VP190 A Review Of Best Practices In Five Mental Disorders In Youth

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INTRODUCTION:

In order to support service planning of the youth program of the East of Montreal Health and Social Services Board, and potentially of the other twenty-five programs across the Quebec province, our hospital-based Health Technology Assessment (HTA) unit was asked to bring evidence of the effective interventions for five most common mental disorders in children and young populations, namely anxiety-depressive disorders, attention deficit and hyperactivity disorder, oppositional and conduct disorders, substance abuse disorders, and suicide attempts.

METHODS:

A review of reviews was conducted for the five disorders in young populations aged 6 to 25 years. This was based exclusively on systematic reviews and meta-analysis of a minimum two randomized-controlled trials. The review was completed with examples of Quebec's good practices in youth mental health gathered from personal research experience of clinical researchers involved in the project. The project involved collaboration with three other hospital units and provincial HTA agencies.

RESULTS:

No review supporting screening and early detection for the five disorders was identified. Prevention, however, was better covered in the literature, and a clear distinction was made between universal, targeted and indicated interventions. In general, targeted and indicated prevention interventions were effective in the case of anxiety-depressive (1) and substance use disorders, while universal prevention strategies seemed to reduce suicide attempts and suicide ideation (2). Effective treatments also exist for these mental disorders. In general, psychotherapies dominated for anxiety-depressive and substance use disorders; parental skills dominated in oppositional disorders, whilst pharmacological treatment dominated in attention deficit and hyperactivity disorder (3). Evidence was limited for suicide attempts. The overview of Quebec's good practices allowed identification of interventions or practices already in use in the province.

CONCLUSIONS:

The review summarized effective interventions for five most common mental disorders in young populations. It also permitted to identify several research gaps, and therefore research recommendations were formulated for the province's health research agency.

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